

UNIVERSITY OF TWENTE

# Across the Border

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*There be Dragons*

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08-08-2016

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## Executive Summary

This thesis describes the effects of the border on the cross-border landscape of the “Witte Veen” through a five-dimensional model of border effects. The Witte Veen/Witte Venn is the name of a natural area located at the border between Ahaus (D) and Haaksbergen (NL). This region exists of nature, farms, roads and most importantly for this research: a border. Even though the EU has opened its internal borders for over 20 years, physical characteristics of the border are still present in the landscape. Through answering the question “What are the effects of the national border on the cross-border region?” the disjunctures at the border will be explored and explained in terms of effects resulting from the national border.

All of the effects of the border as described in the five-dimensional model have been found in the Witte Veen. New insights developed during the research of the Witte Veen have led to a deeper understanding of the persistence of border effects. A lack of bottom-up cooperation seems to prevent the elimination of negative border effects resulting from the national border as a line on a map. The consequences of this lack of bottom-up cooperation have been found in all five dimensions of the border effect model. Furthermore the lack of bottom-up cooperation seems to increase the thickness of the border in the area of the Witte Veen. These new insights show the importance of a bottom-up approach to the integration across the internal borders of the EU.



*Figure 1: Dutch (right) - German (left) border near the Witte Veen. The local persistence of inner European borders.*

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## How to Read

This is a one page description of what one can find in this bachelorthesis. Each paragraph shows the leitmotif and the most important features of a chapter.

**Introduction:** The EU has been working hard to eliminate its internal borders, especially since the Single European Act of 1993. Supranational, national and regional initiatives such as the four freedoms of movement and the creation of Euregios have tried to eliminate the negative effects of borders. On a micro level one can however see that barriers persist to exist. Whether they are disjunctures that exist in cross-border roads, or differences in regulatory systems. In this chapter the tension between disjunctures at borders and an open-border EU will be explored. The issue of integration potentially shows a clash between efforts (top-down) and requirements (bottom-up). In order to understand the driving force behind the persistence of borders in the EU, the micro and nano border effects have to be explored.

**Theory:** The border can be described through looking at literature of economic and regional geography as well as border studies. Through combining definitions of these academic areas, five dimensions of border effects have been identified. Physical, economical, social, political and psychological effects can result from the border functioning as a barrier. These dimensions form the basis for a new model explaining bottom-up borders. This model will show the persistence of borders through the scope of micro and nano level disjunctures in cross-border networks.

**Methodology:** In order to study what the effects of the national border on the cross-border region are, the research will focus on a unit that would be a single coherent element if it wasn't disrupted by a border: the natural area of the Witte Veen. Following a thick descriptive approach (Geertz, 1973), differences in the physical landscape will be observed in order to distinguish disjunctures. These findings will be stylised into disjunctures between networks, which will be diagnosed according to the five dimensions of border effects.

**Case Study:** This chapter describes the Witte Veen on the basis of observation of physical characteristics. A deeper understanding of the origin of these characteristics was created through conducting interviews and doing secondary research. Differences in physical characteristics and management decisions are found. The function of the border has adapted to modern needs of nature protection and tourism. The study has observed the border in all five dimensions, creating a complete picture of the effect of the border on the local landscape.

**Analysis – stylisation of findings:** The found characteristics of the Witte Veen are stylised into disjunctures between networks. Figures show the abstract networks of maps, roads, tourism, nature and management. The networks show the result of the border functioning as a barrier.

**Analysis – diagnosis of networks:** In order to understand the possibilities of bottom-up integration across borders it is important to understand the border effects that have been found at the border. In diagnosing the networks according to the bottom-up border effect model, all five dimensions of border effects have been identified in the area of the Witte Veen.

**Conclusion:** Over the past centuries the meaning of the border has changed. The effect of the border has created disjunctures in the cross-border landscape. Elimination of negative border effects can be achieved through bottom-up cooperation and integration of top-down agreements with micro and nano experiences in border regions.

# 1 The Persistent Issue of European Borders

The EU has been working hard to eliminate its internal borders, especially since the Single European Act of 1993. Supranational, national and regional initiatives such as the four freedoms of movement and the creation of Euregios have tried to eliminate the negative effects of borders. On a micro level one can however see that barriers persist to exist. Whether they are disjunctures that exist in cross-border roads, or differences in regulatory systems. In this chapter the tension between disjunctures at borders and an open-border EU will be explored. The issue of integration potentially shows a clash between efforts (top-down) and requirements (bottom-up). In order to understand the driving force behind the persistence of borders in the EU, the micro and nano border effects have to be explored.

The term “There be Dragons” is believed to originate in cartography, where the term “hic sunt dracones” or 'here are dragons' would signify a dangerous or unexplored territory. In another way this could be noted through the drawing of a dragon or a sea-serpent in an uncharted area. The notation thus relates to something unknown and possibly bad, or unwanted. In that way it is also still used (somewhat jokingly) in the current age where the corners of maps have been explored, but dangerous and unwanted areas may still exist, for example across the border.

One of the first steps towards a peaceful European unification has been set in the 1950s. With the creation of EURATOM and the ECSC, which was followed by the EEC and which is nowadays called the EU. The EU has created several directives, organisations and other means for eliminating the negative effects of its internal borders. One can think of the economic interdependency created through the Single European Market (one internal economic zone), funds such as the ERDF (European Commission, n.d.) and INTERREG (ERAC, 2015). In some cases the ECJ has had a hand in improving cross-border movement through several court cases, improving inter-EU trade and competition. These developments have removed top-down border restricting laws and national practices.

<u>Top-Down</u>	<u>Bottom-Up</u>
Decision making processes and policy creation is handled by a small group of powerful people. It can be compared to a pyramid, where the decisions are taken in the top of the pyramid, and executed in lower levels. When looking at the European borders the agreement signed in Schengen, opening the internal European borders, can be seen as a top-down regulatory decision: EU politicians agree the borders should be eliminated, sign a contract and leave implementation to the national and regional levels.	Local needs and demands provide pressure from below in order to make a government relinquish control (Newman, 2003). This means that a border also can be removed by local decisions and practices. Bottom-up means that rules and regulations are not the driving force behind change. Each level of the pyramid has value to add and a role to play in the decision and implementation processes. Through networking and local interests the border can be overcome as a barrier (Klatt & Herrmann, 2011).

Still many examples of border problems within the EU persist to exist. One can think of differing laws per country (in Germany winter-tyres are compulsory in winter months, in the Netherlands they are not), but also politics (election posters do not cross borders), physical complications (roads



stopping at the border; different road signs per country), or problems resulting from differences in national culture (Hofstede, 1994). There is an understanding that different regions and nations have different networks to which the nation or region is part. And these examples of border problems are also evidence of disjunctures between different networks existing in the EU. Even after more than 75 years of integration in Europe, and more than 20 years after the introduction of the SEM and opening of borders through Schengen borders in Europe persist to function as barriers. This situation begs the question of how these differences relate to a borderless Europe. To what extent do borders still persist to exist in Europe, despite attempts to get rid of them? And in what way are the effects of borders experienced in the cross-border region?

### **Different levels of borders**

When considering the top-down and bottom-up decision-making processes there are multiple layers one should take account of. The described pyramid of course exists of at least a top- and a bottom-layer, but what are the layers in between? When looking at borders there are multiple levels to consider. First of all there is the supranational level, in this case the outer borders of the EU. The EU is comprised of memberstates; the national level is thus the second level. This is then followed by at least four other levels: regional (provinces etc.), local (cities or neighbourhoods), micro (neighbourhoods: still some degree of organisation and collectivity) and the final level is nano (a wall, or a fence: individual or single items functioning as a barrier).

Border theories provide categories to explain the persistence of borders on a national scale, where they have treated borders as disjunctures between systems (Andreas, 2003; Boschma, 2005; Custred, 2011; Haselsberger, 2014; Nitsch & Wolf, 2013; Paasi, 1986; Paasi, 2002; Strüver, 2004; Strüver, 2005; Van Houtum, 2000; Van Houtum, 2002). These theories have however not accounted for the persistence of micro and nano level borders, as can be explained through a lack of bottom-up integration. Borders are not only built on the national level of taxes, law and highways, but also on a regional level, a local level, a micro level and a nano level. Until now borders have been treated without concern for these different levels. The focus has primarily been on disjunctures between nations. One can imagine that the barrier effects of borders are active on all the levels of the top-down or bottom-up pyramid. In order to understand the persistence of borders in the EU the bottom-up border must be taken into account. Therefore the different network domains as described by the literature will be identified in chapter 2.1 to 2.5. These domains will be the basis for a new model introduced in chapter 2.6, in which border effects will be explained through their underlying bottom-up processes, disrupting otherwise coherent networks.

The effect of the national border on the appearance of a border region can be found through looking at the micro and nano level of the border. This focus can explain how local cultural, language, tradition or other barriers affect the overall disjuncture that exists at the border. Governments and politics may provide the answer to why a certain memberstate does or does not invest in its border regions, but the micro and nano perspective can explain whether a national investment also pays out on the bottom levels; in day to day life. The bottom-up perspective provides the insight that governmental decisions are not the only manner in which borders can be eliminated. A border can be built and deconstructed from the bottom up. One can think of incentives such as financial benefits to make one cross a border (Strüver, 2004), or social proximity decreasing the experienced thickness of the border (Haselsberger, 2014;

Hofstede, 1984). Individual beliefs about the other side of the border, such as the thought “there be dragons”, but also “if I don't see it, it's not there”, can also influence the border negatively thus increasing the disjuncture (Boschma, 2005; Strüver, 2004). The question develops into how does the national border affects the border region, to the extent that European borders persist to exist despite of more than 20 years of integration.



## 1.1 Research question

In the field of European integration theories the focus of research has often been on national politics. Less attention has been given to the grass-roots level of EU integration and unification: the effect of the border on the local environment. National decisions have been made for many years, the regional funds, Schengen and the SEM have provided means for cross-border development and regional interconnectedness. Nevertheless it can be said that the EU has not successfully eliminated its internal borders. It is still not clear how a border affects its border region and why the national and supranational decisions have not eliminated the inner borders of the EU. It is therefore the goal of this thesis to find out what affects the border landscape and how the border persists to exist in everyday life. This will be done through answering the research question: **What are the effects of the national border on a cross-border region?** An answer will be found through conducting a case study of one specific border region. The research will look at the cross-border natural area called the Witte Veen, which is located between Haaksbergen (NL) and Ahaus (D). This region is also part of the first EU cross border region “Euregio”<sup>1</sup>. The practical scope of the research will thus become: *What are the effects of the national border on the Witte Veen?*

The research will look into different kinds of cross-border disjunctures that are visible in the cross-border landscape of the Witte Veen<sup>2</sup>. The goal is to explain the effect of the national border on otherwise coherent micro and nano level networks. It is expected that the border creates disjunctures; discontinuities between networks on both sides of the border. By addressing the question of how the region is affected by a national border improvements for experience and implementation of (inter-) national decisions may be identified. This is not only interesting for the small border area which will be examined but as well for all the other thousands of kilometres of inter-EU borders. The outcome of this research can be used for improving cross-border relations on a small level for example between nature managing organisations (see Annex “Article summary”), but also on a national level between governments. From a governmental perspective politicians on all levels of the bottom-up pyramid could use the research as a basis for more informed decisions about cross-border regions, and for cooperation across the border with like minded politicians or organisations. On a supranational level it is important to increase awareness on the persistent presence of EU internal borders.

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1 Euregio came into existence as a cooperation between municipalities across the Dutch-German border near and including Haaksbergen and Ahaus. After it came into existence the European Commission decided to include the regional management of INTERREG with the (increasing number of) Euregios.

2 In the following pages the research will often refer to the area of Witte Veen & Witte Venn as simply “Witte Veen”. If only the Dutch side of the natural area is meant, NL will be added in brackets: “Witte Veen (NL)”. The German side of the natural area will be referred to as Witte Venn (D).

## 2 Five Dimensions of Border Theory

The border can be described through looking at literature of economic and regional geography as well as border studies. Through combining definitions of these academic areas, five dimensions of border effects have been identified. Physical, economical, social, political and psychological effects can result from the border functioning as a barrier. These dimensions form the basis for a new model explaining bottom-up borders. This model will show the persistence of borders through the scope of micro and nano level disjunctures in cross-border networks.

In the following chapter the first five subchapters will explain the network domains (furthermore referred to as dimensions of border effects) as described by the literature. This literature has been found in the academic area's of regional geography, economic geography and border studies. Regional geography is the academic area which describes the emergence of regions and regional identity. Through describing regions it also describes borders between regions (what is included in a region, and what not). Economic geography is relevant for this study from the perspective of the many European integration attempts, which have often focussed on integrating the European economies. Border studies is the area of academic research through which borders and border effects have been explained. The literature found in these three areas, relating to borders, has much overlap, because of which it was possible to create five dimensions of border effects as described in subchapters 1 to 5. The five dimensions of border effects as described below constitute a model through which one can identify the dimension of the border effect. The effect of a border is described as a disjuncture in an environment or landscape (i.e. in a network). The final subchapter of this theoretical section deals with the bottom-up factor of all of these dimensions of border effects. The dimensions of border effects are based upon the five dimensions of Boschma (2005)<sup>3</sup> and Paasi (1986; 2002)<sup>4</sup> and the three dimensions of Van Houtum (2000)<sup>5</sup>. The dimensions are: physical, economical, social, political and psychological.

A border can have more or less barrier functions, and can result in a smaller or larger disjuncture. The amount and importance of the border as a barriers is described through the terms “thick” and “thin” borders (Haselsberger, 2014). A thick border consists of many boundary dimensions (e.g. taxes, fences, prejudices, and perhaps even a natural barrier such as a river), which makes it difficult to cross. A thin border does not have as much influence on it's region, and consists of much less different (types of) boundaries. The more boundaries a border consists of, the “thicker” it becomes (Haselsberger, 2014; Zimmerbauer, 2011). The “thicker” the border is, the more negative effects, such as less cross-border cooperation, it will have (Boschma, 2005). The border is not a static entity, over time a border can move and change, if a border is once “thick”, it can also become “thin” or disappear altogether. This process of change in a border can be described with the terms debordering (erasing the barrier) and rebordering (re-drawing the barrier) (Paasi, 1986; Rumford, 2006).

3 Boschma (2005) explains the success of interactive learning and innovation in the field of economic geography in terms of proximity, stating that aside from geographical proximity there are four other dimensions influencing learning and innovation.

4 Paasi (1986) describes how regions are based upon social constructs from a regional geography perspective and describes the formation of regions through dimensions such as territorial, institutional and symbolic development.

5 Van Houtum (2000) explains three approaches which have been the basis for explaining the European integration process, these approaches however mainly relate to economics and people, and not yet to politics or physics.

## 2.1 The physical border

A cross-border region can distinguish itself from a regular region through showing physical elements in its landscape. These are physical disjunctures between two regions on each side of the border. Through these disjunctures the territorial borders can become recognisable (Paasi, 1986), in which case they can be called physical characteristics of the border. These disjunctures can be a result of a physical effect, but physical disjunctures can also be created by other effects.

Examples of physical characteristics at the border are a customs house, border patrols, border stones, a border gate, a line on a road, perhaps even a fence. The ultimately thin border, would however physically only exist if it were constituted with a natural barrier such as a mountain or a river. In a natural coherent region (e.g. a region without a natural border) there would be no natural physical disjunctures (Boschma, 2005), observed disjunctures would thus be a result of human influences (Paasi, 1986). Without a natural barrier at the border, the landscape should thus be coherent and physical characteristics as a result of the border should thus be absent. Practices of de-bordering and re-bordering can reshape the physical landscape, even when these practices are influenced by the other dimensions of border effects. One can think of political dimensions affecting the physical border (e.g. the fall of the Berlin Wall) (Nitsch & Wolf, 2013), or other dimensions affecting the physical appearance of the national border (e.g. fear of the other leading to increased border-controls<sup>6</sup>, or financial incentives attracting people or companies to cross the border<sup>7</sup>).

The physical border effect can be explained through two main elements: fixed physical characteristics and cross-border movement. The physical border effect can be observed as physical characteristics in a landscape: barriers or differences that would not exist in a non-cross-border region. These physical characteristics would be a result of the border as a barrier, and would be observable as fixed elements (e.g. a border stone or a customs house). Physical barriers can also lead to changes in cross-border movement. Cross-border movement can then also be observed through looking at the coherence in a landscape; if something is equally present on both sides of the border the barrier element of the border can be expected to be small (e.g. the equal presence of fauna on both sides of a border leads to the assumption of a thin barrier). Cross-border movement can however also be influenced by other effects such as political, social, psychological or economical influences and benefits, because of which it is important to see the fixed element of physical characteristics separately from the fluent element of cross-border movement.

### **Physical Example**

A physical effect could be found in the natural barrier of a mountain: a mountain can cast a shadow to one side, or be a barrier to clouds and rain, which can result in different flora and fauna on both sides of the mountain (the natural border). For an example of a man-made physical border effect one can think of barriers at the border such as a customs house, or disjunctures as found in pavement ending or changing at the border.

## 2.2 The economical border

Borders in the EU are seen as an instrument towards creating an inter European economic space (Van Houtum, 2002). The economical border has been one of the main elements the EU has been trying to eliminate in order to create one economic space where cross-border transactions and cross-border cooperation would flourish (Nitsch & Wolf, 2013). Inter-EU regions (such as the Euregio) improve the economical attractiveness of the border region through providing platforms for

<sup>6</sup> A twenty-first century practice is that of closing the borders for certain actors, such as people who operate in violation of national laws (Andreas, 2003). Thus maintaining border-controls in order to limit access to one's nation.

<sup>7</sup> This can be explained e.g. by the psychological border (through migration), but it can also be explained by the economical border dimension of transactions and market structure.

information sharing and support for cross-border business networks (Hofstede, 1994; Klatt & Herrmann, 2011; Nitsch & Wolff, 2013).

#### **Economical Example**

Economical disjunctures between EU memberstates have often been based on legal differences which resulted in cases for the ECJ. One such case was about a regulation in Germany called the “Reinheitsgebot” (Case 178/84). This regulation about what can be called beer banned marketing of beer with many additives. The result was that many foreign beers would not be allowed to be called beer in Germany. The ECJ ruled against the German law, seeing it as protectionism in violation of EU law.

When looking at the economical border effect as an effect on a network, the literature describes several main characteristics. These characteristics are the influence of the border on the economical market and on transactions (Paasi, 1986; Van Houtum, 2000). The effect on transactions has been researched through looking at a change in contacts and contracts established across the border (Van Houtum, 2000). The negative economic effect of a border can make it a barrier to movement and interaction (Boschma, 2005). When turned into a positive effect however, it could be an interface for meetings and points of contact (Newman, 2003; Van Houtum, 2002). The economical effect of the border has also been researched through looking at the market structure in the region. Market structure can benefit from integration and cooperation across a border, making it more like one coherent region (Paasi, 1986). This can best be seen when looking at the division of labour across the border. When labour is equally divided according to the availability of jobs, the economical border effect can be said to be small, and the economical border can be said to be thin. When there is a large disjuncture between labour on one side of the border and vacancies on the other side of the border, the economical border effect is large and the economical border is thick. Ideally the peripheral position of border regions in the EU would be reformed into a more dynamic and central position in the EU, which would lead to a more cost-effective and efficient division of labour and flow of transactions (Van Houtum, 2000).

### ***2.3 The social border***

#### **Social Example**

Although individual incentives such as cheaper housing or higher paying jobs may lead citizens to cross the border, social disjunctures in language, habits and values may lead to misunderstandings. This may result in the creation of exclaves across the border: moving abroad but keeping life (friends, school, hobbies etc.) 'at home' in the country of origin (Strüver, 2005).

The social effect of the border relates to norms and values as typically seen at the regional and national level of society. As such social border effects can result in a barrier to understanding (Boschma, 2005). It can be found in language, cultural distance, habits, shared values and symbols (Custred, 2011; Hofstede, 1984; van Houtum, 2000; Paasi, 1986). Social effects of a border have been researched by looking at cross-border migration, where close proximity to one's own culture, and financial attractiveness were causes for people to migrate across a border. Failure to connect socially across a border would lead migrants to form their own areas (exclaves) in the foreign country, instead of integrating in the new environment (Strüver, 2005).

The theories of globalisation (increasing cross-border activities concurrent to an erosion of borders) and internationalisation (increasing cross-border activities amidst a persistence of borders) also explain how cross-border movement is becoming more common and regions become less attached to physical locations and more to like-minded communities (Teichler, 2009). The effects of a social

border can be seen in the amount of possible colonization in migration (where migrants don't mix with locals) as well as ways of communicating (think of advertisements focussed on one nationality or language). Generally it can be seen as understanding, comfort and trust in cross-border relations and institutions.

## 2.4 The political border

The international politics of the EU have focused on the opening of national borders. The main elements of the political effect of borders are based on political decisions and institutions. The perspective of politicians can influence cross border interests: do they appreciate opportunities across the border, or redraw the border in an attempt to protect local interests (Haselsberger, 2014). As shown in the first paragraphs of the introduction there are quite some examples of the EU de-bordering its internal borders through rules and regulations. There are also examples of local de-bordering practices<sup>8</sup>, where local political decisions have provided the basis for bottom-up elimination of barriers. Political perspectives are the driving force behind re- and de-bordering practices. Cross-border co-operation depends on local, regional, national and supranational aspirations and politics (Zimmerbauer, 2011). In EU politics borders are seen as strategic means for including and excluding, based on a cost-benefit analysis for integration and differentiation (van Houtum, 2002).

The political effects can be observed through looking at cooperation and reached agreements as well as through looking at the local political perspectives. Cross-border political cooperation can also be reviewed through looking at the political structure of a region: through looking at its institutions. Institutions are often built up on the basis of a region. The border of a region can thus be perceived through different networks of institutions. When both societal, public and commercial institutions end at the same border one can speak of a “thick” political border effect (Paasi, 1986). Both institutions and politicians are however dependent on their knowledge of what lies behind the border. When the knowledge gap or difference in institutional structures becomes too large the border will be difficult to cross (Boschma, 2005). The lack of mutual understanding and disconnecting institutional networks will then lead to a thick political barrier.

## 2.5 The psychological border

The psychological effect of the border has shortly been mentioned in the introduction through the examples of “if I don't see it, its not there” and “hic sunt dracones”. These examples are based on individual beliefs and perceptions, or in other words the nano level of society (Boschma, 2005). Psychological borders are constituted by representations (what we know) and imaginations (what we think we know) (Strüver, 2004). They depend on prejudices about the region across the border, individual incentives as well as individual relations, ties and trust. The psychological border effect depends on the knowledge of people that they belong to a certain region, one side of the border (Paasi, 1986).

The border can lead to the process of “othering” (“us” versus “them”), which is based on the mental creation and symbolic shaping of borders (Van Houtum, 2000). Through this process a negative image can be created of the people across the border. Prejudices form the basis for belief of structural differences

### Political Example

The political effect of the border can often be seen in physical characteristics at the border.



Above one can see a picture (of 2013) of a line on a road at the border between Belgium and Luxembourg; the political border effect resulted in the new pavement ending at the Belgian border, even though the road in Belgium required maintenance.

### Psychological Example

In the study on transnationalism by Strüver (2005) one can find the effects of othering in the existence of “exclaves” and “enclaves” near the Dutch-German border. The influence of transnationalism here creates the financial individual incentive for Dutch people to migrate across the German border, without the need for integration, thus creating Dutch-oriented city-regions in Kranenburg, Germany.

<sup>8</sup> One can find such examples in the studies of Strüver (2005) about migration in the region of Kranenburg, and Joenniemi & Sergunin (2011) about city-twinning across borders.

between people on one side of the border and those on the other side of the border. In other words, people across the border can be seen as dragons. The individual border can change due to individual incentives; it can become 'thinner' through incentives such as financial benefit (Strüver, 2005) or 'thicker' when facing a national crisis such as a terrorist threat, increasing border law enforcement (Andreas, 2003). The border can also be influenced by the threshold of indifference: when one is not easily bothered by or interested in something unknown. The psychological border effect thus relates to the individual identification with the border region. This can be studied through looking at personal opinions such as prejudices (Van Houtum, 2000).

## 2.6 Bottom-up bordering processes

In the introduction top-down and bottom-up decision making processes were introduced. The five border effect dimensions explained above will now be used as basis for a bottom-up border effect model. In this model the focus will be on the micro (some degree of organisation and collectivity) and nano (individual or single) level of a border.

<b><i>Bottom-Up Border Effect Model</i></b>		
<b><i>Dimension</i></b>	<b><i>Description</i></b>	<b><i>Border Effect</i></b>
<i>Physical</i>	Barrier through fixed physical characteristics and disjuncture in cross-border movement	<b>Micro:</b> Differences in a small environment caused by natural or human influences such as differences in flora and fauna or disjunctures in road networks. <b>Nano:</b> Individual characteristics created by the national border present in the landscape. Barriers caused by the national border influence cross-border movement.
<i>Economical</i>	Barrier to flow of economical activity as found in cross-border transactions and a disjuncture in market structure as visible through labour division	<b>Micro:</b> Labour market and businesses are influenced by differences across the national border, because of which clusters (businesses, houses, jobs) may form at the most profitable side of the border. <b>Nano:</b> Individual benefits (e.g. jobs, better products, cheaper holiday) can influence a person to cross the national border, leading to local cross-border migration.
<i>Social</i>	Disjunctures in norms and values create a barrier to mutual understanding	<b>Micro:</b> No societal mixing. Clubs and social organisations will not cross the border (e.g. due to different languages, rules, norms and values expected of members). <b>Nano:</b> Individuals will not have a cross-border social network, social movement will thus be limited by the national border.
<i>Political</i>	Political perspectives and strategies are not aligned, differences in organisational structure	<b>Micro:</b> Parties, institutions and organisations stop at the border. There is little cross-border cooperation between parties, institutions and organisations. <b>Nano:</b> Politicians, managers and employees work on

	lead to barrier in cooperation	“their own” side of the border, leading to disjunctures in cross-border projects (e.g. a line on a road due to a difference in pavement at the border).
<i>Psychological</i>	Individual experiences and beliefs lead to cross-border prejudices	<p><b>Micro:</b> Groups of people have the same beliefs, based on preference or prejudice, about the other side of the border.</p> <p><b>Nano:</b> Individual decisions and opinions about the other side of the border. Preferences based on individual experiences and influences.</p>

The dimensions of the border effect model focus on identifying the bottom-up coherence of the border, meaning the effects as experienced at the border, in the landscape. Because of the focus on micro and nano level border effects, the researched area will also be on a micro and nano level. This means a border in a relatively small area can be researched: for example between two municipalities. The effect researched is resulting from the national border. The landscape can be seen as a physical distillate of the border effect dimensions, since it does not only show the physical effects but also other effects in physical characteristics. Because of this the physical border effect will be the basis for further research into the effects of borders on the micro and nano cross-border region. The research question “What are the effects of the border on a cross-border region” can then be answered through finding processes leading to physical barriers in a border landscape. The physical barriers sought are physical characteristics in the landscape, functioning as a disjuncture in a network. The network in which the disjuncture is found can then be related back to a dimension of the border effects. The next chapter will discuss how the research into physical barriers in the landscape resulting from the national border will take place, and how the findings will be explored in order to distinguish the effects and networks of the physical barriers.



### 3 Methodology

In order to study what the effects of the national border on the cross-border region are, the research will focus on a unit that would be a single coherent element if it wasn't disrupted by a border: the natural area of the Witte Veen. Following a thick descriptive approach (Geertz, 1973), differences in the physical landscape will be observed in order to distinguish disjunctures. These findings will be stylised into disjunctures between networks, which will be diagnosed according to the five dimensions of border effects.

The focus of this research is to find out what the effect of the border on the cross-border region is. The theoretical knowledge about borders and regions has been introduced in a five dimensional model. These dimensions are based upon differences between a border region and a normal “coherent” region. The following paragraphs will explain several important definitions used to describe the research, which will be followed by a description of the case selection and method of data gathering and analysis.

#### Definitions

In the following chapters there are several definitions that will be used often. These definitions are: Physical characteristics, (National) Border, Disjunctures and Networks. Physical characteristics relate to things one can observe when looking at a landscape, that can be reasonably seen as indications of the presence of a national border, examples are: border marking stones, border gates or customs houses. The (national) border is the line on a map, as agreed upon by the neighbouring states. Disjunctures can be seen as separations, abrupt differences at the border, inconsistencies in the region in comparison with a coherent landscape (i.e. a landscape without a border). As an example one can think of flora and fauna ending at the national border, or a difference in road information signs across the border (where in an inland region they might not have followed such a straight line). The difference between a characteristic and a disjuncture is that for a characteristic one only needs one 'thing', e.g. a stone. A disjuncture would exist when such a stone would only be found on one side of the border; one would need (the absence of) another thing to find a disjuncture. Networks show connections between things such as characteristics or organisations. A disjuncture would typically be found between two networks. Networks are built upon interactions and transactions.

#### 3.1 Case selection

The purpose of this research is to find out how the border region has been affected, in terms of the five border dimensions, by the national border. These different effects represent disjunctures between networks on both sides of the border. This means that where there are disjunctures between the networks, these networks behave differently on both sides of the border. When looking at disjunctures in networks, in relation to the border, it is important that one is looking at something that would be coherent if it would exist without a border. To be able to observe all of the found border effects, one should look at the physical dimension in the border landscape, since it shows effects of all border effect dimensions. The physical effects can be a result all dimensions, it is not limited to resemble only one effect. Therefore this research has looked at a physical landscape that has a border in it: the area of the Witte Veen.

The Witte Veen has been chosen because it is a cross-border natural area. Although differences in flora and fauna or surface areas such as sand and grass may exist throughout a natural area, it can be expected that if one would look at nature, it could form a coherent area. This could also be the case for man made physical characteristics such as information signs or roads present in such a natural area. That the Witte Veen is a natural area across the border is important for the coherence that would be expected; clearly both sides of the border have designated the area for the same purpose: nature. At the start of the research the area showed to include much more than only nature managing organisations, involving more actors and presenting a broader field of characteristics of the border. These new insights led to a development of the research. Where up to this point finding border characteristics as a result of border effects in the area had been a primary goal, this would now be complemented by research into explanations for the found border characteristics. This meant that the research would not only focus on the nature in and managers of the Witte Veen, but on all actors involved in managing the area, relating to all characteristics of the border present in the Witte Veen.

### **3.2 Method of data gathering**

The research of this thesis consists of primary and secondary data. The research followed a thick descriptive approach (Geertz, 1973), meaning a comprehensive image of the cross-border region has been presented and inferences about the observed situation have been drawn. This approach is appropriate for the study, since the goal of the study is to understand all the effects of the border on the landscape. In order to see all the effects, the landscape and development of the region must be completely understood, which is best done through thick description. The research will look at disjunctures in the cross-border landscape, focusing on understanding why the breaks at the border exist.

#### **Thick Description**

This is a perspective towards research with a background in anthropology and ethnography, most clearly described by Geertz (1973). It attaches value to an interpretative analysis in search of meaning. It can be used in instances where observation alone is not enough to explain a situation, since there could be multiple explanations for the same event. Only through interpreting the observation can one fully understand the situation. Thick description is furthermore microscopic; it looks to one small part of society, to extrapolate it into systems and dimensions. The three main characteristics of a thick descriptive approach can be found in (1) its purpose to interpret found data in order to (2) understand and interpret the flow of social discourse and (3) preserve data for future use. This can also be seen in the Annex “Analytic Plan”, which was co-designed with Paul Benneworth and shows the analytic structure of this thesis. “The aim [of thick description] is to draw large conclusions from small, but very densely textured facts” (Geertz, 1973).

In order to illustrate the performed research, actions will be explained through using the Witte Veen as an example, therefore this section will also contain information about the case study of the Witte Veen. This is done so that the reader can understand what has been done, so that it can be explained, and so that people can understand the extent of which these methods are transferable to other situations. The research described focuses on the cross-border area of the Witte Veen at the Dutch-German border between Haaksbergen and Ahaus, which consists mainly of a natural area. If this landscape would not have had a border across it, it was to be expected that it would have been a

coherent unit. Because of the national border going through the natural area and the surrounding landscape, it is expected that disjunctures can be found.

### 3.2.1 Primary research

Primary data gathering was focussed on collecting data about the physical appearance of the cross-border region in order to describe the area of the Witte Veen through physical characteristics of the border. Primary data has been gathered in two ways. Firstly observations were made in the area of the Witte Veen, which was supplemented by photo's. This data was gathered while walking in and around the natural area and driving around the area, on both sides of the border. Driving and walking were combined in order to get a more complete picture of the border region and the present physical characteristics.

Observations by foot were carried out by hiking a hiking route<sup>9</sup> in the Witte Veen and visiting the central touristic location of the Haarmühle. This was done in order to observe the area and look for physical differences or characteristics of the border. When such differences would be found, photos would be taken. The photos would be important to support later explanations and to be able to retrieve the findings in stead of solely trying to remember appearances. Border crossings were sought for by car<sup>10</sup>. Observations by car were focussed on physical characteristics in the area of the Witte Veen as well as on border crossings. In order to find the border crossings closest to the Witte Veen a map was consulted to find the border crossings expected to be nearest to the Witte Veen. The maps did however not provide complete certainty that these were the only border crossings. In order to confirm possibilities for border crossings all roads leading towards the border between the border crossings would be tried as well, on both sides of the border. Evidence and characteristics found by car were also captured in photos. In total 350 photo's have been taken.

The second manner of primary data gathering was conducting unstructured interviews with managers of the area<sup>11</sup>. This was done in order to understand how the border affected the local management as well as how the observed disjunctures at the border came to be. The interviews were unstructured in order to get as much information as possible about the border, the physical landscape and management decisions leading to physical characteristics. This would thickly describe the situation, gathering all possible important data. At the start of the research it was the purpose to interview according to what physical characteristics were found, and relating the characteristics back to the managing organisations resulted in contact with eight parties active in the area of the Witte Veen. In total 8 interviews have been conducted.

### 3.2.2 Secondary research

Secondary data was mainly gathered through searching the internet for relevant information about the Witte Veen and the national border. The search for this information was focussed on finding (historical) background information (e.g. about definitions and encountered concepts<sup>12</sup>) to the

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9 I hiked the shorter hiking route, as the longer route only went more inland and did not cross the border more often. Also I hiked the longer hiking route half a year ago and remembered the landscape seen by hiking the longer route was not much different from that seen at the shorter route.

10 I had not been able to conclusively find a bordercrossing to the north and south of the Witte Veen on a map, so by driving around the area I would be able to find out where I could cross the border.

11 A list of interviewed managers can be found in the Annex, under "Interviewees", this lists their names, functions and the organisations they work for. In the following Annex, "Interviews" the summary of the interviews can be read.

12 These were concepts such as "Nature 2000", for which the "Gebiedsanalyse voor de Programmatische Aanpak Stikstof (PAS) Witte Veen" (Gedeputeerde Staten van Overijssel, 2015) is an important managerial document in the

information gathered at interviews as well as to understanding the persistence of border effects in the development of the area of the Witte Veen. Information was found in the form of text such as policy documents, websites or articles and maps.

The history of the area was researched through looking at maps, as well as through reading about the location of the Haarmühle, and studying the existence of border marking stones. The goal of researching the history of the area was to find out how the physical landscape of the region had changed over the years, and how this was related to the border. The maps showed several of the developments related to roads as well as to the natural area, but also how mapmakers decided to display the area. The maps provided in this thesis have been created from screenshots of the online source of topotijdreis (Kadaster, 2015). There are two types of screenshots presented in the findings; micro and nano maps. These screenshots have been created of the most detailed map provided, resulting in the nano screenshots, and of the maplevel above this detail (i.e. a map covering a larger area but showing less detail) resulting in the micro screenshots. In total 30 maps have been researched which were all of the maps provided of the Witte Veen area. The complete set of maps researched can be found in the annex. The division into a presentation of micro and nano maps has been made since different types of maps (different scales) show different developments. Because nano maps use more space to cover the same area, the area shown in the nano maps is smaller than that shown in the micro maps. This has been done to provide both an overview of the area, as well as the possibility of showing differences in details.

Recent maps were used to create an overview of the research area, so that photo's taken could be put together with their corresponding locations. Maps were also used as background information when driving in the area, to check border crossings. Detailed maps of the Witte Veen provided by different actors were checked for reciprocal differences which would contribute to a disjuncture.

### **3.3 Method of data analysis**

The analysis of the found data would consist of two steps. First of all the thick-descriptive data, which would consist of physical characteristics, would be stylised into networks and disjunctures between networks. Secondly the disjunctures between the networks would be diagnosed as a result of border effects. This would result in findings (i.e. physical characteristics) being part of a network, influenced by border effects that would be related to the according dimensions of border effects. In annex “Analytic Plan” (co-designed with Paul Benneworth) one can see the methodological plan for the case study of the Witte Veen. The plan starts with the thick description of the case study as described in the “Method of Data Gathering” as shown through photo's of border characteristics. The analytical steps (step two and three) consist of stylising the findings into disjunctures between networks and diagnosing these disjunctures into the border as described by the theory. The diagnosis will be based on the border effect dimensions mentioned in the theory, which have been summarised in the table shown in the below-right corner of the analytic plan.

#### **3.3.1 Stylising networks**

The first step of the analysis consists of abstracting the thick descriptive findings into networks. The goal of stylising the findings is to see their reciprocal connections. The findings have been stylised

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Netherlands. For watermanagement this was the “Kaderrichtlijn Water”, which had been explained to me by Friso Koop of waterschap Vechtstromen. Because these documents and definitions were not always all-explanatory, contact was also established with the “Regiegroep Natura 2000”, of which the questions and answers can be found in the Annex.

into networks on the basis of observations, information from interviews and secondary data; this made it possible to disentangle findings into networks. An example are the informative signs in and around the Witte Veen. Differences between the signs were observed (colours, text, pictures, contributing parties). Through interviews it became clear that the signs were managed by different parties, and belonged to different hiking and biking networks. The hiking and biking networks would be the basis for further analysis; did more characteristics fit to this network, or did it seem a stand-alone fact and was another network showing more and clearer disjunctures at the border. These networks would not necessarily show disjunctures at the border, they would show connections between individual characteristics, eliminating the individuals from the process. This meant focus shifted from individual facts (what was told or what had been observed) towards recognising what part these observations took in a larger network, and what the role and extent of such a network was. The stylisations would be supported with schematics to emphasise the reciprocal connections.

### 3.3.2 Diagnosing disjunctures

A disjuncture at the border shows that the networks on both sides of the border are not connecting, they are rather pulling apart. The disjunctures between networks could be seen as attributing to different kinds of border effects. The basis of this research was looking for physical characteristics in the landscape, and as explained the underlying effect to physical appearances could be found in not only the physical dimension but the other four dimensions as well. In order to diagnose the stylised networks these found networks would be related to the theoretical dimensions of border effects. The table in chapter 2 is the basis for diagnosing the networks. The diagnosis would be made in terms of the correspondence of the network with the border effect dimensions and the explanation of the nano and micro level border effects. This provided the possibility to extrapolate the different dimensions of border effects from situations that would normally be defined as simply more- or less connections. Furthermore the underlying explanations of the border effects would be related back to the bottom-up dimension of cross-border cooperation.

## 3.4 Summary of activities

The answer to the research question “*What are the effects of the national border on the Witte Veen?*” will be found through the following steps. The effects of the national border have been defined in chapter two as five dimensions of border effects. These effects will be researched in the Witte Veen through conducting primary and secondary research. Primary research will focus on observing the physical landscape in order to distinguish characteristics of the border and explanations for these characteristics will be sought through conducting interviews with the managing actors of the area. First of all the VVV of Haaksbergen and the Tourist Information of Ahaus would be visited in order to get information about the Witte Veen area. The goal of these visits was to research the type of information provided by these locations, and whether the locations provided different information. Secondly the area of the Witte Veen was scouted by foot and by car. A hiking route was walked and border crossings were examined for proof of existence and size of crossing. After this managers of the natural area(s) were contacted for interviews, after which other actors in the Witte Veen were distinguished and contacted. Secondary research would look for further explanations for disjunctures at the border in the historical background of the area and in development of maps of the area. It existed mainly of internet research. The case study would be thickly described, which resulted in a complete picture of physical characteristics at the Witte Veen as a result of the national border. These characteristics were stylised into disjunctures between networks through distinguishing reciprocal connections. The stylisation of networks would form the

basis for diagnosing the networks in terms of border effect dimensions. This would be done according to the table as presented in the chapter of the theory. The diagnosis would show which effects were present in the landscape of the Witte Veen, and what the underlying explanations were for the persistence of the border functioning as a barrier to cooperation in the cross-border area of the Witte Veen.

## 4 Thick Descriptive Case Study of the Witte Veen

This chapter describes the Witte Veen on the basis of observation of physical characteristics. A deeper understanding of the origin of these characteristics was created through conducting interviews and doing secondary research. Differences in physical characteristics and management decisions are found. The function of the border has adapted to modern needs of nature protection and tourism. The study has observed the border in all five dimensions, creating a complete picture of the effect of the border on the local landscape.

This chapter thickly describes the physical characteristics and disjunctures that were found when researching the area of the Witte Veen. Figure 2 (Google Maps, 2016) shows the area that has been researched. The dark green line shows the Dutch part of the natural area “Witte Veen”, and the light green line the German part of the natural area “Witte Venn”.

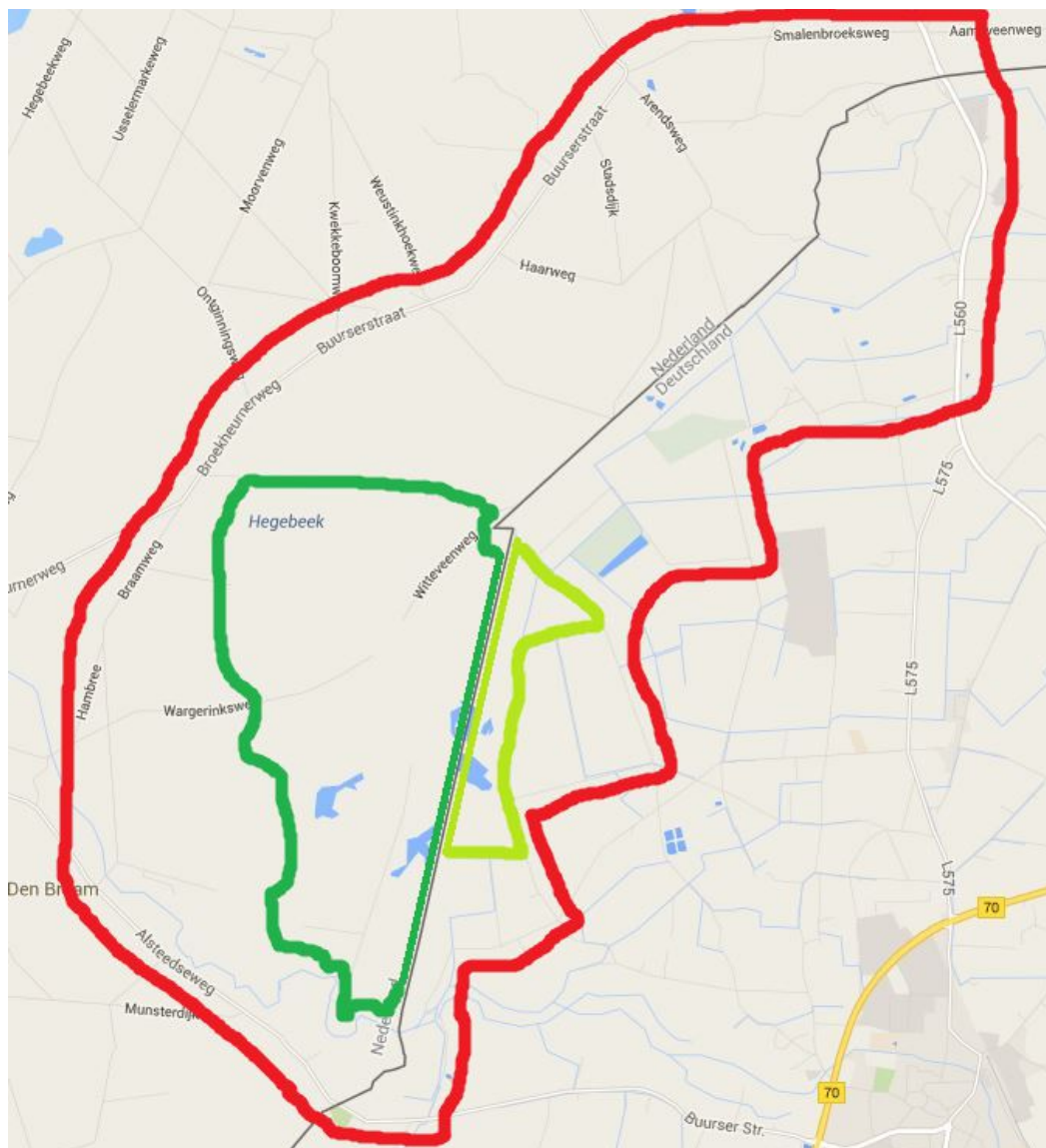


Figure 2: The Witte Veen area, enclosed by roads



The red line in figure 3 is drawn alongside roads that were driven on by car, and as one can see they make a closing circle. The following paragraphs provide a description of the landscape and geography, the history of the area, and the actors present in the area.

#### **4.1 History of the Witte Veen**

The history of the Witte Veen shows it has been a border region for many centuries. Because of this long history as a border region historical landmarks can be found in the region, such as border stones, but the area has also been able to develop itself as a natural area because of the quietness of the region. Information about the history of the Witte Veen has been gathered through reading a book written by a local: “Die Haarmühle” by Franz Brüggemann (1992), as well as through studying historical maps of the area. Later on explanations for disjunctures at the border would be sought, which would sometimes lead back to the history of the Witte Veen. Information about history would then be found in online research or during interviews.

History of the mill (Haarmühle) located near the Witte Veen dates back to 1180, when the bishop of Münster desired lands after the defeat of Sachsenherzog Heinrich des Löwen. At that time the region of Twente was given in loan to the bishop of Utrecht. The Haarmühle was part of Alstätte, and therefore belonged to Münster. The border at that time was located more to the west, but would shift over the years. In the 13<sup>th</sup> century the Haarmühle belonged to Herrschaft Diepenheim and in 1331 it was bought by the bishop of Utrecht. At that time an agreement was made to divide the domain into two entities, of which Buurse would belong to the bishop of Utrecht, and Alstätte would remain in the hands of Münster. In 1350 the first mill was built at its current location. In 1676, after many years of war, Münster and the province of Overijssel signed an agreement about the exact line of the border, which would lead from the Berkel at Oldenkott to the Amtsvenn near Gronau, it is said that at that time a trench then divided Twente from Munsterland, and the oldest border stones date back to this time.

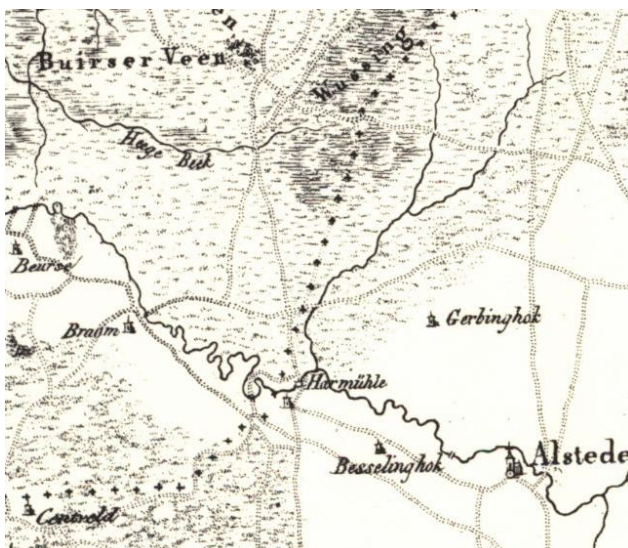
The name of the mill (Haarmühle translates to Haarmill) refers to the oldgerman word “Haar” which means hill or elevation. This means that the location was named after a mill on high ground. The mill is located between Ahaus and Haaksbergen, near the border crossing of Beßlinghook. It is a starting and resting point for many hiking and biking routes. The area around the mill includes several oaks and beeches that are over 500 years old. At earlier times it was usual to plant a tree (e.g. a linden tree) when an important structure or house had been built. It is however a possibility that the trees at this location are even older than estimated, since the first mill at this location has been built more than 650 years ago. The current farmhouse dates from 1865.

The Haarmühle is a central location in the Witte Veen area in which currently a cafe is located. It is a place for recreation, but also for meetings between managers or informative meetings with the public (where attendance of Dutch and German was according to Natuurmonumenten 50-50%). It's not specifically directed towards one country, it's staff is both Dutch and German, speaking both languages, information provided at the location (e.g. a menu) is provided in multiple languages (amongst others Dutch and German), foods and drinks at the cafe also provide Dutch and German specialties and it was possible to pay with both Dutch and German banking cards. Two members of the staff were spoken with, who explained that there were both German and Dutch customers, and that there was not a clear majority in either of them. Furthermore they explained that parties or other festive activities were also from both Dutch and German origin at the location. Just before handing over a book about the history of the Haarmühle the manager also narrated her personal experience

with the border (as she lived here for over 40 years). She was very content about the border opening up, as it no longer meant one had to cross the border before 10 pm (when the border closed). She did notice a change in local language; where it used to be that locals could understand the Twents and Platt, there now became a larger difference in language since less people spoke these regional dialects.

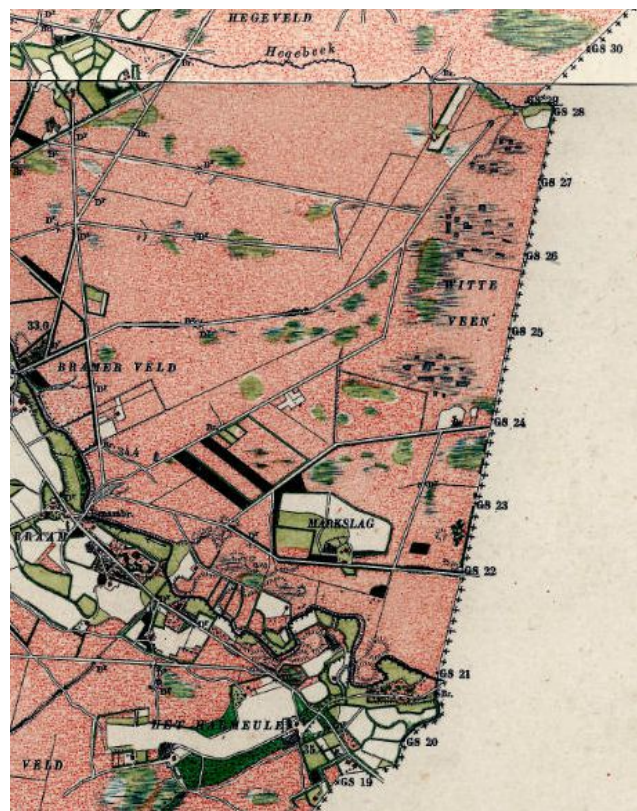
There are also many stories about smuggling in the area of the Witte Veen (Brüggemann, 1992). Examples relate to use of everyday products and foods. In one example flour was bought in the Netherlands, where it was one third of the price it was in Germany, the same was true for coffee and other products. On some occasions alcohol such as the German Schnapps was smuggled into the Netherlands, as currency because of the decreasing value of the Mark. Another smart example of “smuggling” was that of landownership across the border: chickens could mysteriously lay their eggs on the most profitable side of the border, and harvest was harvested on that side as well. Where in some years border officials and custom officers would control the border very strictly, at other times it was much easier to get goods across the border. This however also depended on the presence of local snitches or informants.

The development of border crossings also shows an interesting development, as can be seen when looking at historical maps of the area (Kadaster, 2015). On the first map about six border crossings were visible, following maps only showed about one or two crossings. In 1938 this amount leapt to seven crossings on the micro map, which went back to about four crossings in 1965 and the following years. In 1991 and 2002 the amount of border crossings seemed to be high again, about 6, but in 2010 and 2011 again only 2-3 were shown. It must be said that counting border crossings on these maps is quite difficult, since the maps lack proper inscriptions and the types of roads are not certain. Therefore roads could have been counted, that were not fully accessible.



1820

The first map provided by the Dutch cadastre of the region of the Witte Veen. The Witte Veen is not yet shown, it is located between the Heege Beek (to the north) and the Harmühle (to the south). The southern part of the shown Wussing Veen is thus the northern part of the (not yet





existing) Witte Veen. The map shows several bordercrossings as well as sites such as the Harmühle and the Buirser Veen. The border is shown as a line of pluses.

1898

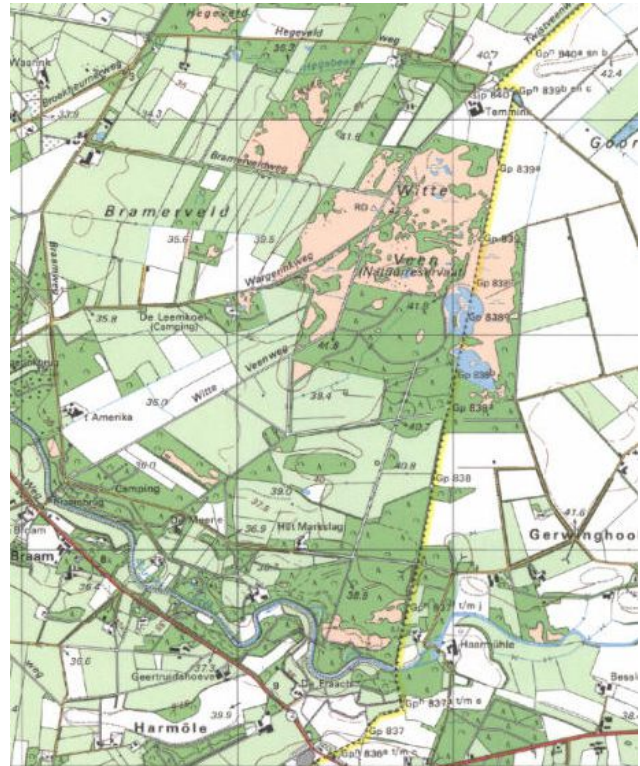
The map of 1898 is a more detailed map than the map of 1820. This is also in many ways the first map of its kind: it has a more detailed scale, it is in colour and the map only shows the Dutch side of the border.

Although in following years maps the German side of the border is again shown, it is often only in black and white. There is also an important difference to be accounted for: the scales of the maps shown in this section are not all the same. Because the scale of 1898 is more detailed a smaller area is shown, therefore the maps are not comparable in e.g. the amount of border crossings. For the full set of studied maps one can look at the annex “Historical maps of the Witte Veen”.



1944

This is micro map, but it is interesting because it is the first map to break with the trend of showing different colours across the border. The maps created after this one show the same change.



1995

In the following years more maps would be published, often with less years between the publishings than before. The amount of border crossings shown on the map would change, and one could see the railway line (in the upper right corner of 1944) disappear. Because of the unclear inscriptions it was not possible to provide a reliable count of roads ending at the border. The historical maps did provide an interesting insight into the end of the railway line between Ahaus and Enschede. This railway line has disappeared earlier on the Dutch side of the border than on the German side of the border, while it still ends at the border.

The trend of equal detail and colours on both sides of the borders would continue up until 2011, where besides the more vague colouring of the German side of the border, one can also see that the information on that side of the border for the natural area is incorrect (the area is larger than shown). The strange thing is that the information shown in 2011 is also of a less developed stage than the information shown in 2010. In the map of 1995 one can clearly also see the Witte Veen, and that it has received a status of “Natuurreservaat” on the Dutch side of the border. The roads

shown on the map also largely resemble the roads found during the case study.

Two developments can be seen on the maps. The first is the development of the border. Although the border has been decided about already in the start of the 19<sup>th</sup> century, minor changes can be seen on the map, just south of the brook between Buurse and Alstätte. Near this area the customs office of this large road was located. The second development is that of the shown numbers of border stones. At first low numbers (between 19 and 34) are shown, later these numbers are accompanied by large numbers (between 836 and 841), on the latest maps only the large numbers are shown<sup>13</sup>.

The historical maps show the links of through time, through the changing picture of this border region. However at the moment, in current map systems, cooperation is lacking due to a difference in usage of land registry and other technical products (Pavlovic, 2016; Michel, 2016).

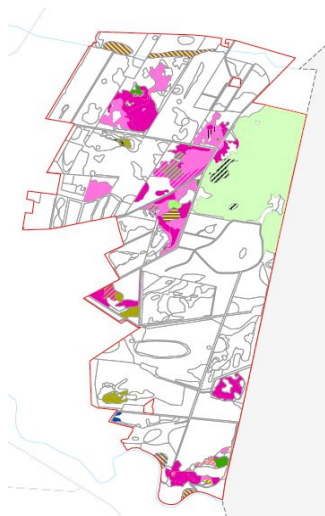


Figure 3: Witte Veen (NL)

Next to researching historical maps of the cadastre, present-day nano maps of the natural area were also looked at. These maps were provided by the local managing organisations of the natural area, and although both the German and the Dutch side of the border are shown in figure 2 (at the beginning of this chapter), as well as on and satellite images, this was not the case for the specialised maps of the area. On many specialised maps only the country for which the map is made is shown, leaving the other side of the border blank, as can be seen in figure 3 (Gedeputeerde Staten van Overijssel, 2015) and 4 (Kerstan & Stanislawski, 2008), which are maps of the Witte Veen and Witte Venn. Through



Figure 4: Witte Venn (D)

interviews and online research it was possible to find out that this was caused by a technical issue. The German and Dutch cadastre (map makers) use different programs, which are not compatible and which resulted in different kinds of maps. This came from a long standing historical difference on how to make maps (Pavlovic, 2016; Michel, 2016)<sup>14</sup>. Some organisations such as Euregio make effort to create custom made maps that do cover the complete border region, this however takes a lot of time and money, which is not always available for internationalisation purposes. An example of an Euregio map can be found in the Annex.

13 The old border stone numbers in this area range from 19 (road to the south of the brook) to 34 (at the railway line), these numbers started at the border between Overijssel and Gelderland (Dutch provinces) and went up until the north of Groningen. The newer border stone numbers start much more to the south (below Maastricht), and range from 836 (near old number 19) to 841 (near old number 34). Although I refer to the numbers as old and new (since the old maps only show the small numbers and the new maps also show the large numbers), the numbers actually date back to the time that Germany did not exist yet. The large numbers date back to the time that the Kingdom of the Netherlands included Belgium and Luxembourg, when the first border stone was located at the border between Luxembourg, France and Prussia and was created in 1818, after the defeat of Napoleon. The small numbers lead back to the border between the Netherlands and the kingdom of Hannover and were created in 1824 (Grenspalen, n.d.; Grensmarkeringen, n.d.; Markestenen en markegrenzen in Twente, n.d.).

14 Another interesting note on the issue of maps is that in the Netherlands Google provides the possibility of “streetview”, this is in Germany for many places not the case, since Google stopped adding and updating its service in Germany after a court decision in 2011 (Ho, 2011).

## 4.2 Actors in the Witte Veen

The natural area Witte Veen/Witte Venn is located on the border between the Netherlands and Germany. The Witte Veen (NL) lies in the municipality of Haaksbergen, in the province Overijssel. Haaksbergen is part of the organisation Regio Twente, to which many other municipalities in Overijssel are also member. Regio Twente can be seen as a counterpart to Kreis Borken<sup>15</sup> in Germany. The Witte Veen (NL) is managed by Natuurmonumenten. The Witte Venn (D) lies in the municipality of Ahaus, in Kreis Borken, in the bundesland Nordrhein Westfalen. The Witte Venn (D) is managed by Kreis Borken. Watermanagement is also divided on the border, in Germany it is managed by Kreis Borken and Waterschap Vechstromen manages water in the Netherlands. Euregio is a bottom-up association of municipalities in both Germany and the Netherlands, which is focussed on supporting cross-border communication and cooperation.

A list of interviewees can be found in the annex, as well as a summary of the interviews conducted. Research started with a visit to the local tourist information in search of information about the Witte Veen. The tourist information in Ahaus and the VVV in Haaksbergen were visited. A lot of information folders were handed out, of which a German folder was received in Germany (no Dutch was available, an English folder could have also been received) and a Dutch folder in the Netherlands (other languages were also available, amongst which was also German). After gathering information at the tourism centres and the Haarmühle, contact was established with several actors, and interviews were planned. The first interviews were held with the managers of the natural areas. In these interviews the background stories to physical characteristics in and around the natural areas were sought. Other interviewees were selected through online research about the area as well as through advice of managers of the Witte Veen.

Natuurmonumenten manages the Witte Veen (NL). It is a large association, which also manages a lot of nature in the rest of the Netherlands. On some occasions they have been invited to manage natural areas stretching across the Dutch border as well. The tasks of Meulenbroek, the interviewee, is to protect and manage the Witte Veen (NL). The primary focus of the Nature 2000 part of the management is to protect the peat moor and special flora and fauna in the area. Natuurmonumenten has introduced a natural looking breed of cattle: Highland cattle. Natuurmonumenten does not only manage the natural area, but also all paths, dirtroads, brooks and creeks leading through it. Natuurmonumenten is in close contact with other organisations managing other (Dutch) natural areas<sup>16</sup>, as well as with parties interested in entering their natural area's for recreational purposes (e.g. for a bike tour). One of the ways Natuurmonumenten protects its natural area is by enlarging the natural area, in prior years this has been done through purchasing lands in the vicinity of the Witte Veen. At the time there is however a problem with land in which Natuurmonumenten is interested: farmland to the north of the Witte Veen (NL), next to the German border. The German farmer on this land is willing to relocate to a field in Germany, and funds are available to acquire new land but the problem lies with extra funds needed to deal with the taxes needed for this relocation: taxes need to be paid both for the acquisition of the land in the Netherlands and for the acquisition of the German area. None of the parties involved (Natuurmonumenten, possibly Kreis Borken and the German farmer) are willing to pay this extra money. At the moment the focus has shifted to attracting local interest and support of farmers to maintain their lands more ecologically

15 A kreis is a type of constituency, which consists of several municipalities. It is thus larger than a municipality, but in hierarchy it ranks lower than a province or bundesland.

16 Natuurmonumenten is both in contact with Dutch (e.g. Staatsbosbeheer and Landschap Overijssel) and German nature managing organisations (e.g. Kreis Borken), the contact with the Dutch organisations is however said to be more often, with more cooperation amongst the Dutch organisations.

responsible, supported by subsidies. This new direction is cheaper than obtaining more lands, it also fits the strategy of finding support for nature and making the area attractive for the public. Kreis Borken is the manager of the German side of the Witte Venn. Being a constituency it has many more tasks. The manager, Pavlovic, of the natural area explained that in total he managed about 60 square kilometres of natural area for Kreis Borken. The focus of Pavlovic is to protect the natural area, also meaning the area is not accessible. He has placed informative signs and huts looking into the Witte Venn (D) so that people can enjoy nature.

Regio Twente is not an official governmental organisation (like Kreis Borken), but an organisation that has municipalities as members (which in this case are the Twentse municipalities). It handles the tasks designated to it by its members in order to coordinate such tasks more effectively. For the case of the Witte Veen it is the manager of tourism, which is handled by Van Den Heuvel. Van Den Heuvel manages the Twents Wandelnetwerk as well as the Fietsknooppuntennetwerk in Twente, which both have routes leading through the Witte Veen (NL). Through managing these networks they also have close contact with other organisations directed at hiking, biking or other networks, such as the Noaberpad. Regio Twente creates routes through the Witte Veen (NL) in consultation with Natuurmonumenten, these routes are mostly maintained by volunteers (either of Regio Twente or partner organisations such as the Noaberpad)<sup>17</sup>. The Noaberpad<sup>18</sup> is a long-distance hiking route organisation, which has arisen from a local labour initiative. The route (in the Netherlands designated as LAW 10) leads from Nieuweschans (Groningen, the Netherlands) to Emmerich (Nordrhein Westfalen, Germany) and goes through the Witte Veen (NL) (section no. 14, Enschede – Haaksbergen, Buurserstraat). After being developed in the early 20<sup>th</sup> century in the provinces of Drenthe and Groningen, the route would increase in length and cross-border opportunities<sup>19</sup>.

Haaksbergen is the municipality in which the Witte Veen (NL) is located. It's direct German neighbour and partner is Ahaus. The municipality is not much involved with the management of the Witte Veen area. The cross-border disjuncture search of this research focused on the partnership between Ahaus and Haaksbergen, and possible other cross-border cooperation. Rouwenhorst, a member of Haaksbergens city council, explained the existing labour disjuncture as well as the cross-border perspective of local politicians. Haaksbergen and Ahaus are also both members of the Euregio. According to Michel the Euregio is a bottom-up, cross-border public organisation, created to support cross-border initiatives. It does not govern or manage the area, but assists local demand. The Euregio is a partnership of 129 municipalities. Euregio is a self made supporting administrative and managerial body which often manages projects. It is a centre for information about its members, lobby on local demand and connecting parties across borders. Activities by Euregio include increasing publicity, knowledge and awareness of cross-border possibilities. To achieve this it has a small set of private means (such as facebook, twitter and press related events such as the “Tag der Nachbarsprache”). Euregio also acts as an intermediary between and for its members. The

17 In some cases Van Den Heuvel also consults with German managers, e.g. when a route crosses into a German natural area. At the Witte Veen this is not the case, since in Germany the route only follows the public road.

18 The organisation came into existence at the beginning of the 20th century, when holidays became more common for the Dutch working class. A Dutch organisation called “instituut voor arbeidsontwikkeling” [IvAO] had developed several holiday houses and interest was growing for possibilities of travelling from house to house. In this time the most common way of transport was hiking. While focussing on supporting the interest in culture and nature a hiking route through the northern provinces of Groningen and Drenthe was created, which would lead through many cross-border natural areas. In 1959 the IvAO developed into the “Nederlands Instituut voor Volksontwikkeling en Natuurvriendenwerk” or NIVON.

19 Some time before the borders were opened by Schengen, hikers could cross the border without having to go through customs on so called “green border-crossings”.

main goal is to eliminate the negative effects of the border, i.e. eliminating barriers<sup>20</sup>.

Waterschap Vechtstromen manages water (groundwater, rivers, larger streams, etcetera) on the Dutch side of the border. It only manages the larger water areas, so not the moor or the small creeks in the natural area of the Witte Veen (NL). It does manage the Hegebeek, which is located to the north of the natural area. The border of the managed area of Waterschap Vechtstromen leads through the Witte Veen, the Ahauser Aa, which is located to the south of the Witte Veen, is managed by Waterschap Rijn IJssel. The Waterschappen are subject to public vote, for which elections are held at the same time as the elections of the Dutch provinces. Water management is there for all land users, giving it a large role in tuning all needs, and combining the development of those needs with (inter-)national legislation. Koop explained that one of the most important bodies of legislation for Waterschap Vechtstromen is the “Kaderrichtlijn Waterlichamen”, which is a European framework for the management of water in the same way Nature 2000 is a framework for the management of nature. The KRW is executed on a local level by the water management administrations together with the national minister (Minister of Infrastructure and Environment). The goal of the KRW is to improve the ecological water quality (e.g. flora and fauna) of the water (rivers, streams, etc.) throughout the EU. For Vechtstromen this means that some streams have a nonoptimal flow, and have to be adjusted accordingly. This is done through restoring the natural flow areas of streams, letting them meander more, and increasing the speed of currents. In the area of Vechtstromen the purpose of water is aimed at its natural value, for this purpose groundwater levels are also elevated. This is however only the case for the streams managed by Vechtstromen. Smaller water bodies such as ditches are often managed by the local land owner<sup>21</sup>. Because of different needs of local landowners, industry, society, politics and nature Vechtstromen is always finetuning between (inter-)national legislation, political perspectives and local needs and demands.

### ***4.3 Landscape and geography of the Witte Veen***

The area of the Witte Veen consists of several types of landscape on both sides of the border. It has been a protected natural area from the 1940s and onwards. The centre of the landscape revolves around the natural area of the Witte Veen and the location of the Haarmühle in the south of the natural area. The natural area stretches across the Dutch-German national border, although the largest part (over 3,5 square kilometres) is located in the Netherlands, and the German part of the natural area is only about 0,3 square kilometres large. Both the Witte Veen (NL) and the Witte Venn (D) have a Nature 2000 status, however the Witte Venn (D) is next to a nature reserve also a bird sanctuary. The Dutch side of the Witte Veen is an area of about 3 square kilometres, it is a combination of (peat) moor, meadows and forest areas. An important characteristic of this natural area is the peat moor found in the northern part of the area. Next to that the natural area is also home to several protected plants and animals such as the “eenarig wollegras”, the great crested newt (*Triturus cristatus*) and a common tree frog (*Hyla arborea*) (Gedeputeerde Staten van Overijssel,

20 In the past years this has proven to be a difficult task, since management across the border often has different desires. For example the management of water: The Dutch side lobbies for more flood areas on the German side of the border, and the German side wishes that water would flow more quickly through the Dutch areas. On the other hand; the Haarmühle is a bottleneck for the migration of fish. This is explained according to Michel by the focus of local politicians; Kreis Borken makes plans without paying attention to the actions or plans of the Dutch.

21 Land owners can usually do as they please with their own land, as long as it provides no problems to the general water management. Often most of the land around the streams managed by Vechtstromen are not even their own property, but by law they are the responsible party for managing the water flows. Next to that in the last few years it has become more common for Vechtstromen to sell land instead of buying it. This does emphasise the importance of cooperation with local partners, as public support then becomes even more important.



2015). On the German side, the Witte Venn (D), consists of meadows, wetlands, grazing areas and bog. Around the Witte Veen there is an agricultural area, which contains small roads and ditches. Two villages are located close to the Witte Veen: Buurse on the Dutch side and Alstätte on the German side.

It has been explained in several interviews that it is not uncommon that a border area such as this exists of rare nature. This is because for many years the border had been avoided, since it had not been certain which land belonged to whom. This gave nature room to develop itself. Another effect of nature at the border in this case is that because of differences in legislation it is allowed in Germany (but not in the Netherlands) to hunt. The Dutch side has a larger natural area, and species such as wild boars and roes come from Germany into the Netherlands. Meulenbroek explained that local farmers experience a lot of inconvenience because of these animals and they complain to Natuurmonumenten, wanting them to take action against these animals so they can no longer harm the farmers crops and income.

#### 4.3.1 Nature in the Witte Veen

Research online into the meaning and working of Nature 2000 led to the detailed plans for the Witte Veen (NL)<sup>22</sup>, as well as to the “Regiegroep Natura 2000” to which several questions were sent about how a Nature 2000 area is chosen, how cross-border Nature 2000 areas connect, and which part of the EU is responsible for Nature 2000. The summary of questions and answers can be found in the annex “Summary of contact with Regiegroep Natura 2000”. The Regiegroep explained that each memberstate selects their own areas, selection can be based on habitat-guidelines provided by the EU and has to be according to several criteria. EU guidelines furthermore make conservation measures compulsory, and overall this falls under the responsibility of the Commission, DG Environment. This means that the Dutch part has been selected by the Dutch, and the German part has been selected by the Germans. In the case of the Witte Veen this meant that the Nature 2000 indication has been applied to by each country separately, first by the German side, followed some years later by the Dutch side. And because the German side in itself was not large enough to apply for a Nature 2000 status, the Witte Venn (D) was combined with the Krosewicker Grenzwald in its application (combined size over 0,7 square kilometres).

On the German side the area is maintained as a resting area for birds and nature, with information signs on nice viewpoints into the area. The management area's do not cross the border, and are thus managed as neighbouring areas. On the Dutch side of the Witte Veen plans for the division of the natural area have been made; the southern part will be appointed for recreational purposes such as camp sites, the attractiveness of the Haarmühle<sup>23</sup> on the German side, and the main hiking routes, the northern part will be kept more quiet with only one larger hiking route, and no paths towards the border. According to Meulenbroek this division has also depended on the German side being closed to visitors, making it easier to also close the neighbouring Dutch natural area.

22 I was able to find several administrative documents about this such as the Dutch “Natura 2000 Gebiedsanalyse voor de Programmatische Aanpak Stikstof (PAS) Witte Veen” (Gedeputeerde Staten van Overijssel, 2015). This document describes in detail what the plans are for the Witte Veen on the Dutch side, and how rare nature will be protected in this area. It is an obligatory document for a Nature 2000 area.

23 The Haarmühle is an establishment on the German side of the border. It is run by a German family, but also has a lot of Dutch employees. It is a place for both Dutch and German festivities, and provides next to German food and drinks, also specific Dutch brands. The staff is able to communicate bilingual, as well as in the local Twents and Platt. And next to reading a Dutch menu, one can also pay with a (Dutch) bankcard.

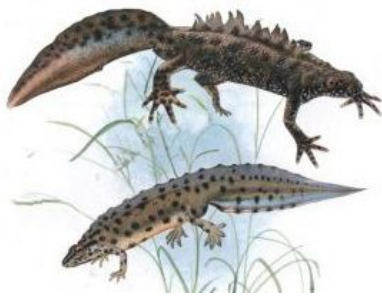


Figure 5: Great crested newt

In relation to the Nature 2000 status Meulenbroek mentioned the EHS (Ecologische Hoofdstructuur). Apparently Mr Bleker, “staatssecretaris van Economische Zaken, Landbouw en Innovatie”, decided to end this program that had been created to connect Dutch nature. Meulenbroek explained that this has disastrous effects on local populations of e.g. the great crested newt shown in figure 5 (WARF, 2016). Since this small animal wouldn't be able to get from its current location at the Witte Veen to a newer area (as was its habit), it will most likely disappear from this region all together. The

(non-) existence of rare species also provides another issue, related to Nature 2000, for management. This is best explained through the presence of the salamander and the tree frog. On the Dutch side both species are present and protected, on the German side however only the tree frog has been found and because of this only the tree frog is protected through management policy.

A development on the border occurred with the introduction of cattle into the Dutch natural area. In a trial period they were able to cross the border into Germany<sup>24</sup>, but when this did not prove a success, the fence along the border was closed again and Germany introduced its own cattle. When the German side took their own tenant, this tenant introduced another type of cows (Heck cattle). Both the Highland cattle and the Heck cattle are familiar species for nature managers to acquire. On the Dutch side the animals are self-sufficient, having a check-up only once a year. On the German side the cattle needs supplementary feeding in wintertime. Next to this the choice for Highland cattle on the one side and Heck cattle on the other side can also be related to the more tolerant attitude and charming appearance of Highland cattle in the natural area in which tourists are allowed to hike. The Heck cattle is less tolerant, but is a species bred back towards a more natural historical species (AI, 2016).



Figure 6: Highland cattle which grazes the Dutch (but not the German) area of the Witte Veen.

#### 4.3.2 Water at the Witte Veen

On the Dutch side of the border much value is attached to the support for nature and water, and support for the way nature and water are managed. This support is sought through meeting with locals and other actors in the area (such as farmers), as can be seen in informative meetings of Natuurmonumenten or the management style of Waterschap Vechtstromen, which has “kitchentable meetings” (conversations at the kitchen table) with locals to discuss plans before they are put into action. The information meetings are important for bargaining with the farmers who see nature and water management as a structural problem to their livelihood. The clearest example of different needs is that of the German farmers located at the north and east of the Witte Veen (NL)<sup>25</sup> and managers of the natural area of the Witte Veen (NL) and Witte Venn (D). For production farmers

24 Before this would be possible, there were already some hurdles to take, such as rules and regulations that were different per country. E.g. the cows in Germany required a blood examination, which was not obligatory in the Netherlands.

25 Another border issue is that of landownership in relation to relocation of farmlands to the benefit of both farmers and managers of nature and water. Against the border on the Dutch side of the natural area a German farm is located. This provides problems for nature management on both sides of the border. Both sides of the border are also interested in relocating the farmer to German land, however due to the extra expense of taxes this plan is not executed.

need low groundwaterlevels. The farmlands therefore drain water from the surrounding areas, including the moor, into the Hegebeek, which leads the water quickly out of the area. Although this is profitable for farming, it is a structural problem for the local wild and water life. In order to develop the moor namely needs high groundwaterlevels. For nature it would also be beneficial if the Hegebeek would be shoaled, which is also likely to lead to higher groundwaterlevels. Agreements in the past years have created a basis for better protection of nature, but the executions of these agreements does not always go without a struggle. The shoaling of the Hegebeek is also dependent on the German side executing the agreement; if that is not done the development of the brook is halted. And even though agreements about the brook and the needed retention have been reached for several years, the execution of following plans has not been performed accordingly. At the moment a basin has been created at the German side of the border, this however does not function as a retention area for peak water levels (flood area).

### 4.3.3 Hiking and biking routes through the Witte Veen

Where in prior times the Witte Veen and other moors in the area were seen as a region for production (e.g. of turf), since the 20<sup>th</sup> century it has become a natural protected area, and since several years the area is designated as Nature 2000, giving it a special status within protected natural areas. This nature near the border has attracted tourism, which in the area of the Witte Veen can be experienced through visiting the Haarmühle and hiking or biking local routes.

In the area of the Witte Veen several hiking and biking routes can be found. The hiking routes start at the Haarmühle, but for the largest part lead through the Dutch part of the area. Meulenbroek explained this was the case because the German side did not want hiking paths in their natural area. Although the routes do cross the border, they are one-sided initiatives. The hiking routes in the area are provided by “Wandelnetwerk Twente”, which is part of “Regio Twente”. The hikingnetwork first started as a local Twents initiative, but because of its success it is being copied to not only other Dutch regions, but also German ones. The Noaberpap is a clear example of a Dutch bottom-up cross-border initiative, since it was created by local volunteers for labourers on holiday. In the area of the Witte Veen also biking routes can be distinguished, part of the Dutch “fietsknooppunten-netwerk”. These are however only connecting points to the German bike route network. A larger bike route called the “Flamingoroute” has been created by Biologische Station Zwillbrock E.V. (thus a German initiative), and was subsidized by Interreg. At the moment however due to unclear responsibilities the maintenance of the route is decaying. There are several other local initiatives for cross-border routes such as ponytravelling routes, reasons for creating such routes are often local interest, tourism (making money), the attractiveness of natural areas as well as available subsidies.



*Figure 7: Pavilion for the Flamingo-route near border crossing*

In order to see whether it was possible to distinguish border characteristics in the natural area a hiking route was hiked. The hiking route that was followed starts at the location of the Haarmühle in Germany (cafe, parking place, water mill), it quickly crosses the border when crossing the Ahauser Aa/Buurse Beek. This brook crossing is done on a bridge called “komiesenbrug”; it was originally meant for border patrols. The hike goes through the Dutch natural area, but in order to end at the Haarmühle it crosses the border again, which is on a larger path (figure 12 and 14 show this path) which leads to an asphalted road leading back to the Haarmühle. Just before entering this road a pavilion (figure 7) can be seen with a lot of information about the Witte Veen as well as other recreational locations in the area and a biking route called “Flamingoroute”, a few meters further

there is an information sign about the “Hessenweg”; a path from Deventer to Münster as well as a Dutch “fietsknooppunt”. The information on all signs is bilingual (Dutch and German). The second border crossing is more difficult to distinguish, for the attentive hiker it can be recognised by a traffic sign standing near the road, showing one is entering a 'zone 60' area, which is a different speedlimit than what is allowed on the German side of the border.

Along the larger border region many more physical characteristics such as border landmarks (e.g. figure 8) are still present. Van den Heuvel (Regio Twente) explained that these landmarks are present because of the importance of the concept of “border experience” for tourism. Tourists, especially those coming from the western (no border) part of the Netherlands find it interesting to see a border. They could e.g. want to make a picture of themselves standing with one foot in the Netherlands, and the other in Germany; crossing the border. Because of this importance for tourism it is a primary focus for tourismmanagement in the region managed by Regio Twente to keep the remaining border landmarks intact, and in some cases even restore older (sometimes demolished) border landmarks<sup>26</sup>.



*Figure 8: Border pole between the municipalities of Haaksbergen and Lonneker in 1826, also a national monument.*

#### 4.3.4 Border crossings near the Witte Veen

In both Germany and the Netherlands there are smaller roads leading towards the border, but the border section of the natural area is not accessible by or allowed for a regular car, in some cases the road simply ends at the border.

There are only several roads with cross-border opportunities across the Dutch-German border in this region. The first is located closely to the south: Alsteedseweg (NL) – K17/Buurser Straße (D), the other more to the north: Knalhutteweg (NL) – L560 (D). Both of these border crossings are large provincial roads. Within and around the area of the Witte Veen there are also smaller roads, but even though they lead towards the border, no possibilities for cars or trucks to cross the border is created, in some cases border crossing is prevented physically or with a sign.

There are no plans to create more border crossings for motorised vehicles, since it is not in the interest of nature or tourism (two influential topics in the region). The response from managers of natural areas is that nature is protected better with quiet roads and surroundings, of which the waste deposit<sup>27</sup> in Germany is a clear example: it houses several rare species of animals and birds. The response of tourism is that tourists come to the region to experience quietness, nature and sometimes the lack of radiation (from cell towers etc.). As far as the managers could tell me, there was also no local demand for small open cross-border roads. Next to that the local farmers that wish

26 One example of a border landmark which Van den Heuvel wishes to restore for tourism is that of Komiesenpaden; paths along the border which used to be roads walked by customs officials. Many of these paths have perished and been neglected (e.g. Natuurmonumenten has deliberately stopped maintenance of them in the Witte Veen so nature could more easily cross the border), but from a tourism perspective it may be very interesting to re-open some of these paths for people to experience the (former) border.

27 Even though this waste deposit is located near the border, according to Rouwenhorst (Gemeenteraad Haaksbergen) it is not used by Dutch organisations.



to cross the border are said to have keys to the obstructions, so that they can pass them with their tractors.

Roads in the Netherlands are often publicly owned (e.g. by the municipality), in Germany they can be privately owned, which creates more difficult for organisations creating hiking, biking or other routes (since they have to discuss their plans with more parties). For the Witte Veen it was therefore an easy choice for the manager of biking routes (Regio Twente) to let the biking route only go along the public road, which was allowed in order to link it to the Haarmühle.

Throughout history the smaller roads have been used for smuggling, however since it is now possible to legally buy products in other EU member states, smuggling of “normal” products has become a non-issue. This was also already the case before the inner borders were opened by Schengen, when so called “green border crossings” existed: places where one (pedestrian, cyclist) could cross the border without having to go through customs. Nevertheless the historical meaning of the roads near the border can still be found back in their names. Often such names relate back to an important characteristic of the road such as “Grensweg” (border road), “Twistveenweg” (dispute about a moor – road) or the more recent “Euregioweg” (Euregio road). To give an overview of the border-crossings that were have encountered, several pictures and their locations are described below.



*Figure 9: K17 (D) to Alsteedseweg (NL)*

Figure 9 shows the border-crossing to the south of the Witte Veen. It was easy to recognise this border crossing, since there were many physical characteristics pointing one's attention to the fact that one would be crossing a border. Next to the “standard” signs one can see at a border crossing, explaining e.g. speed limits of the entered country, two old remnants of the closed border were found. The perspective of the photo is from Germany into the Netherlands, on the road Alsteedseweg (NL) and K17 (D). Next to the shown border gate one could also see the old customs house, which is currently being used as a shop.



*Figure 10: Google Streetview*

The other border-crossing, (the Knalhutteweg (NL) and L560 (D)) on the road several kilometres to the north of the natural area was much more difficult to distinguish. At the time it was simply driven across, without being recognised. There also was no parking space at the border, so it was not inviting to take a picture there. Next to that the road was busy, with little time to stop a car. Later a picture of a sign posted close to the border was found on Google Streetview, as can be seen in figure 10 (Google

Streetview, 2016).

It was also attempted to cross the border by car on the smaller roads near the Witte Veen. This resulted in the following pictures.



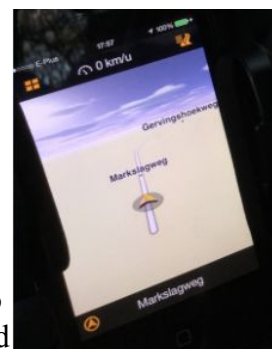
*Figure 11: Berenbroekweg (NL) to L560 (D)*

This “border-crossing” is located close to the Knalhutteweg, it connects two smaller roads: on the Dutch side a small street (Berenbroeksweg) with several houses, and on the German side a farm, which it there connects to the L560. On both sides of the border it was possible to legally drive up to the border, the small 'bike pole' however obstructed me from driving across the border. In total two other locations were found where a car could theoretically cross the border, in one case the road was obstructed physically, in the other case drivers were denied entry (figure 12).



*Figure 12: Markslagweg (NL) to Gerwinghook (D)*

This border-crossing (figure 12) is located in to the natural area the Witte Veen, a few hundred metres north of the Haarmühle. On the navigation software (figure 13)<sup>28</sup> one can see that the road ends. When entering from the German side, one is however not obstructed by a sign denying entry. Driving from Germany into the Netherlands the road did exist and did connect.



*Figure 13:  
Navigation*

The road at the Markslagweg was unpaved and of rather a bad quality in the Netherlands: there was a lot of mud and some pools, even though the days before it was driven the weather had been dry.

<sup>28</sup> Next to not showing the border-crossing road, cell reception was also bad in the border region.



*Figure 14: Gerwinghook (D) perspective towards NL*



*Figure 15: Gerwinghook (D) to Witteveenweg (NL)*

Searching for a border-crossing near the area of the Witte Veen every road in the area was driven on. Some roads did lead towards the border, but no connections were found that crossed the border.



*Figure 16: Twistveenweg (NL)*

The German side of the border at Gerwinghook can be seen on figure 14, near which the pavillion of figure 7 is also located. Entering Gerwinghook/Markslagweg from Germany into the Netherlands, signs prohibiting entry were not encountered, and thus the road was followed towards the border. On what resembled a difference at the border, a “zone 60” sign could be detected, as well as a “fietspad” sign, but nothing explaining a national border was crossed, or not to go further. On the German side of the border (in figure 14) one could also find Dutch biking signs and a map of the Dutch “fietsknooppuntennetwerk”.

Figure 15 shows the border-crossing directly north of the Witte Veen. The road leading up to the crossing is large enough for a car, but a few metres before the bridge the road turns into a path. The bridge connects the Witteveenweg (NL) to Gerwinghook (D). The bridge crosses the Hegebeek, a brook leading into the Netherlands and going along the north side of the Witte Veen.

The Twistveenweg is such a road. It leads alongside the Dutch-German border and is located to the north of the Witte Veen. This road leads up to the border, but does not cross it. On the other side of the border, there is simply no road to be seen that could connect to the road leading up to the border. It was told that this type of roads has been used by customs officials as “Komiezenpaden”; roads along the border with no other function than to check check the border (e.g. for smugglers or other illegal activities).



#### 4.4 Information and communication about the Witte Veen

There are several ways of finding information about the region of the Witte Veen. First of all there are information signs in and around the natural area. These signs sometimes belong to a specific hiking or biking route, and are thus intended as support to recreational purposes. An example is the sign provided at the start of the hiking routes at the Haarmühle<sup>29</sup>, a more extensive example is the pavilion near the border crossing provided by the Flamingoroute (figure 7). A third way of providing information is through informative folders, which can be collected at tourism centres such as Tourist Information in Ahaus, or the VVV in Haaksbergen, but also at more local popular places such as the Haarmühle. The realization of information depends heavily on the availability of subsidies. Near the border almost all signs are bilingual (i.e. Dutch and German). This is also the case for the informative folders. Next to depending on subsidies, the provision of informative sources is also dependent on parties willing to engage in creating such a source. This means that for example the informative folders have been made by many different parties over the last few years, which often don't cooperate across the border, since enough general knowledge is available on both sides to produce a folder<sup>30</sup>.

Next to information for recreation and tourism, Euregio provides information with a goal to support cross-border initiatives. It provides information for cross-border interest, and can provide subsidies to cross-border projects. According to Rouwenhorst the information and support provided by Euregio has however not led to a cross-border labour market, since there is still a disjuncture between unemployment in Twente and employment openings in Nordrhein Westfalen. To resolve this problem a cross-border lobby for the labour market has been introduced, and cooperation with Euregio has been intensified<sup>31</sup>. Another example of a labour disjuncture at the border is that of "start-ups"; small businesses focussed on innovation and development. For these businesses moving to Germany could be interesting because of lower real estate and land prices. Differences in rules and legislation, as well as language however often prevent businesses and labourers to cross the border.

In 2015 Haaksbergen and Ahaus celebrated their status as partner. When looking at the result of this partnership it can be seen that both towns still have their own business area, their own rules regarding businesses and labour is attracted in the way it has always been done. Although there are, next to festivities, also special theme days on common issues such as refugees or the labour market, here too a lack of contact and information sharing results in a disjuncture at the border. According to Rouwenhorst this can be explained by the mindset of many people working in (local) politics. A common perception is that the only interesting area is that which is yours, what is governed by you. For municipalities near a border this has resulted in a lack of local cross-border communication, cooperation and integration (as was explained by Rouwenhorst by referring to both Ahaus and

29 The signs provided at the Haarmühle are a bilingual initiative of Natuurmonumenten. Meulenbroek explained that Natuurmonumenten created these bilingual signs because of the many German tourists in the region. A new plan is for information signs in both Dutch, German and English, so also international tourists can understand the information.

30 Despite folders being produced in multiple languages and in different years, when I went to the VVV in Haaksbergen and the tourist information in Ahaus, I nevertheless received respectively a Dutch folder created by Natuurmonumenten and a German folder created by Kreis Borken, even though these are both older than the newest created folder by Nordrhein Westfalen.

31 Another example of a cross-border initiative can be found at Waterschap Vechtstromen. For questions that intersect with issues of across the border they have a dedicated cross-border team. Cross-border communication and cooperation however is not a main focus for the day to day operations of water management, and only becomes a primary perspective when specific problems arise.

Haaksbergen still having their own industry areas, without using the partnership to integrate or cooperate in these areas). This perception is however not exclusive to the national borders, but also to inland borders with other municipalities. Next politicians not looking across the border, in prior years budget cuts have also been made in cross-border municipal initiatives. This also meant giving less attention to things such as partnerships. It can be said that the combination of budget cuts and a focus on the area within a municipality has led to the sentiment of “own problems first”, while disregarding the fact that solutions to these problems may be found across the border.

## 5 Analysis of Characteristics and Disjunctures

The found characteristics of the Witte Veen are stylised into disjunctures between networks. Figures show the abstract networks of maps, roads, tourism, nature and management. The networks show the result of the border functioning as a barrier.

Through the case study and interviews it was possible to create a picture of the coherence and disjunctures in networks of characteristics and actors of the Witte Veen. The touristic centre of the Witte Veen is the Haarmühle, which is also one of the oldest places in the area. From this point several hiking routes are started, and the biking routes in the area also find their way to the cafe. The Haarmühle has also been a place for meetings of the managers of the area, when they would consult their cross-border counterparts. The Haarmühle is located close to the southern cross-border road, giving it easy access from both Germany and the Netherlands. In figure 17 one can see the relationships of the actors in the Witte Veen through a simplified schematic.

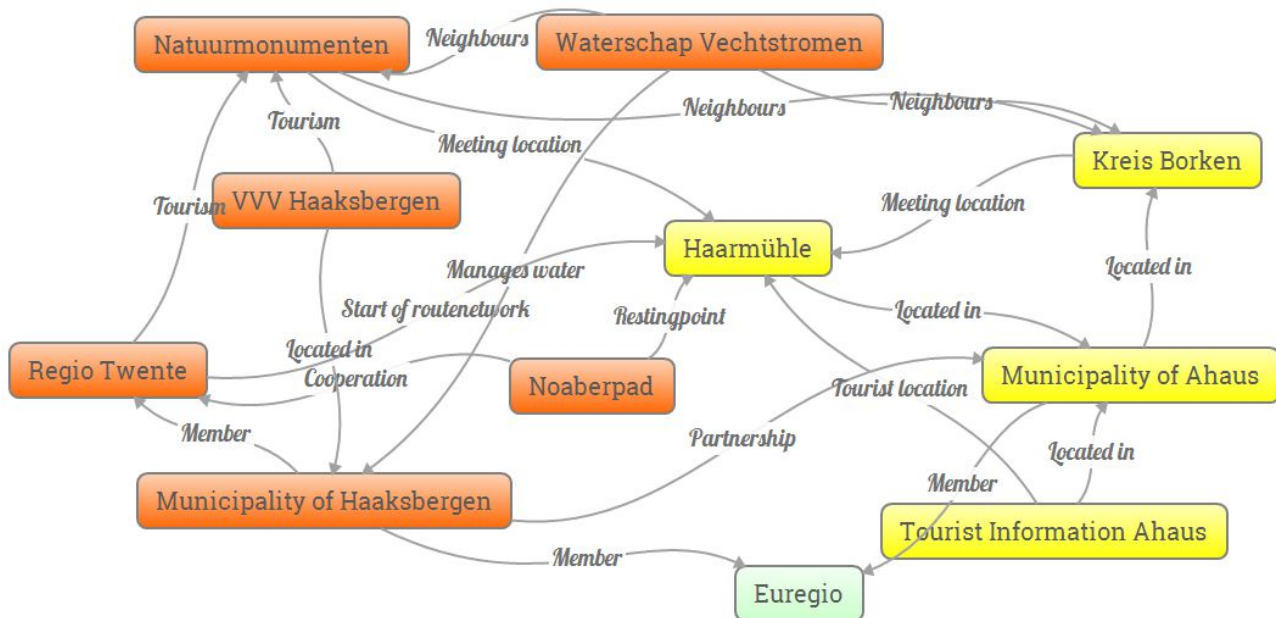


Figure 17: Relationships between the actors of the Witte Veen

As one can see the actors and their relationships are not a simple direct copy on both sides of the border. The structure of organisations on the Dutch side of the border (shown in orange) is quite different from the structure of organisations on the German side of the border (shown in yellow). Where on the German side of the border most management is conducted by hierarchical governmental institutions (Kreis Borken, Municipality of Ahaus), on the Dutch side management is split into governmental institutions (Municipality of Haaksbergen, Waterschap Vechtstromen), semi-governmental institutions (Regio Twente) and a public association (Natuurmonumenten). The division in figure 17 has been made on the basis of the nationality of the organisation, because of this Euregio, although physically located in Germany, is neither Dutch nor German: it consists of both Dutch and German member municipalities (which in relation to the Witte Veen are Haaksbergen and Ahaus).

In the following paragraphs one can find the networks that have been stylised from the findings. Although the research has focussed on physical characteristics in the landscape, both physical and

non-physical networks have been found. The physical networks described below characterise themselves through being observable in the physical landscape, the non-physical networks relate to organisation and management, they are best observed through their social context.

## 5.1 Map as different systems

The Dutch historical maps showed differences across the border through reducing the amount of colours in the foreign country (a decision by the map maker) as well as through showing the railway line stopped existing in the Netherlands prior to being eliminated on the German side of the border. This shows a clear disjuncture: differences of representation between the own and the foreign state and difference in construction on both sides of the border, even when it comes to the same project (a railway line).

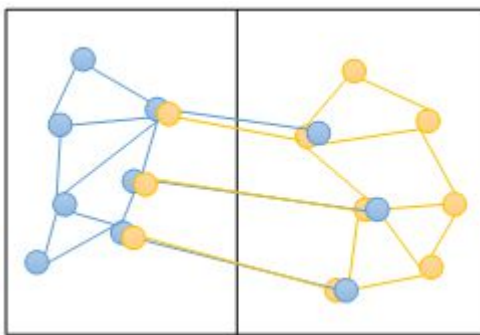


Figure 18: Systematic representation of maps

The disjuncture in representation on maps continues even to the present day. Recent national or regional maps may continue across the border, but older maps or specialised maps end at the border<sup>32</sup>. This problem originates at the different programs used to map land by the cadastre of respectively the Netherlands or Germany: each country uses its own products, which are not compatible with the other. Some organisations such as Euregio make an effort to create custom made maps that cover the complete border region (see example in annex), this however takes a lot of time and money, which is not always available for internationalisation purposes. This observation of the network of maps leads to

the schematic as can be seen in figure 18. In this figure the two different colours represent the two different networks (i.e. programs), thus the two different countries. One can see that the networks do seem to cross the border, which is represented by the black line. The networks however only cross the border for a short distance, and then don't connect with the other network. This means map programs cross the border, but they remain part of the network of one country. And although one can thus see a part of the other country, the border does affect the network as a barrier. This can also be seen when looking at the roads that end at the border on the map.

The roads shown on the historical maps show changes in numbers throughout time. One can see that since the start of mapmaking by the Dutch cadastre there has been a changing amount of border-crossing roads. The amount of roads also depended on the scale of the map. A trend can be found when looking at maps from the 1950s onwards. At this time one can assume that map making was already detailed enough to show a continuous amount of roads, nevertheless the amount of roads on the micro map decreases from 7 in 1940 to only 2 in 2011. On the nano map one can also see that even on this small piece of land the amount of roads has decreased from 4 to 1, as can be seen in figure 19. In this figure one can see the development of the amount of border-crossing roads over time. The nano map shows less border crossings than the micro map, which is not unexpected since the nano map also shows a smaller surface than the micro map. One can see that over time the amount of border crossings on the micro maps first developed from few to many, and

<sup>32</sup> This is also for a large part the case for Google Streetview, although it has a different origin from nano maps.

Google Streetview is available in the Netherlands, but only in a few parts in Germany. This is because several years ago Google lost a court case, preventing it from creating new pictures without the agreement of (owners of) what or who was on the picture. After this Google decided to stop mapping its Streetview in Germany.

then back to only two. On the nano maps one can see that the maps displayed three border crossings, which became less over the years.

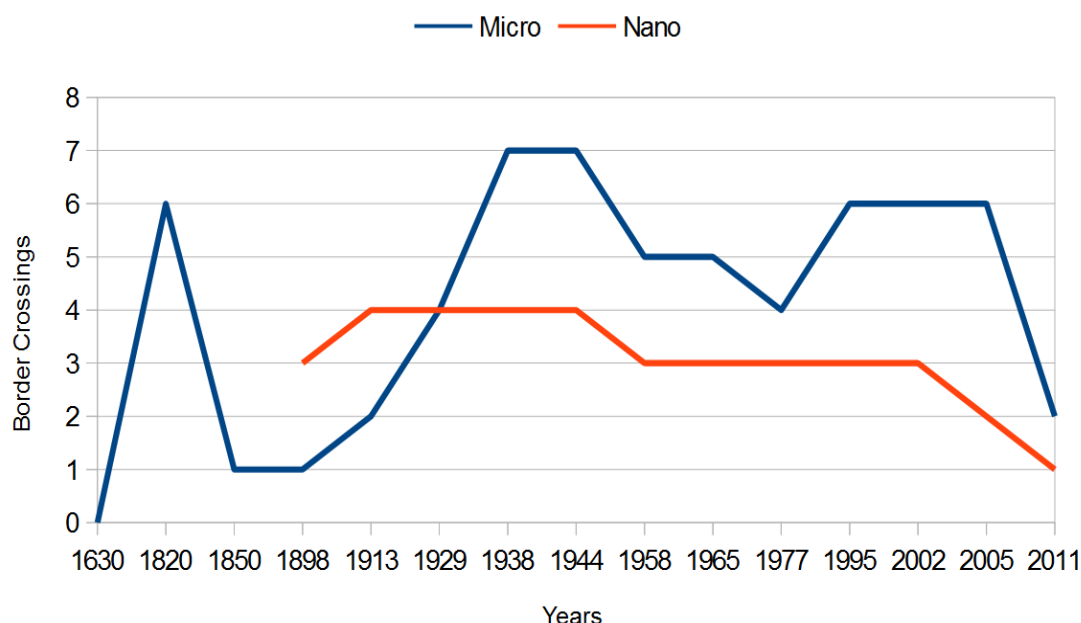


Figure 19: Border Crossings on Maps of the Witte Veen

The development of roads shows the development of disjunctures between the Dutch and the German side of the cross-border region. The more roads connected across the border, the less disjunctures existed. This thus also shows that from the early 20<sup>th</sup> century until the 1940s there was an increase in connections. From the 1950s onwards one can see a trend in decreasing the amount of border crossings. This trend was shortly reversed after the 1970s. In 2011 however only 2 border crossings were shown on the micro map. This can be the result of correcting a prior update (as in some cases it could be seen on the maps that they did not show a true resemblance of the Witte Veen<sup>33</sup>), but it can also show a new trend of rebordering. This rebordering trend is also explained by the local managers of nature and tourism explaining there is no demand for small border-crossing roads, and that it is more profitable for tourism and nature to close these roads for motorised vehicles at the border.

It can thus be said that a disjuncture between different map networks exists, leading to different programs creating maps on both sides of the border. Furthermore a disjuncture exists between roads at the border. Historically it can be seen that both trends of debordering and rebordering have been observed in the road networks. At the moment the trend seems to again reborder and thus increase the barrier at the national border. This disjuncture in road networks is further explained in the next section.

33 This was e.g. the case for the maps of 2010 (nano) and 2011 (nano); one can see that the Witte Venn (D) was more developed on the map of 2010 than on the map of 2011, this is not a true resemblance of the development of the area.

## 5.2 Roads disconnecting

Over the past years the amount of roads across the border has decreased, which points to an increased thickness of the border. That the border is perceived as a barrier, or a region for debate, can also be seen by the names given to roads near the border (e.g. Twistveenweg), as well as the placing of border stones and the existence of komiesen-paths. From the found roads near the border a division according to road type can be made, as can be seen in the following table. The first type represents the main border crossings: the large roads to the north and south of the Witte Veen. Next to roads for cars there are also smaller cross-border roads and paths.

### **Type of border-crossing road**

- 1 Cross-border roads for cars and other motorised vehicles
- 2 Cross-border roads with an obstruction at the border  
→ These roads are large enough for cars, but are not accessible by motorised vehicles
- 3 Cross-border paths and dirt-roads  
→ These paths are often used for hiking or biking
- 4 Roads not crossing the border
  - Ending at the border
  - Going alongside the border, and then going back inland

At present the border remains a barrier for smaller roads, which end there, turn back or are obstructed. The large roads in the area of the Witte Veen do cross the border. Nature and tourism are the main reasons that small roads do not cross the border, that is; that one can not cross the border

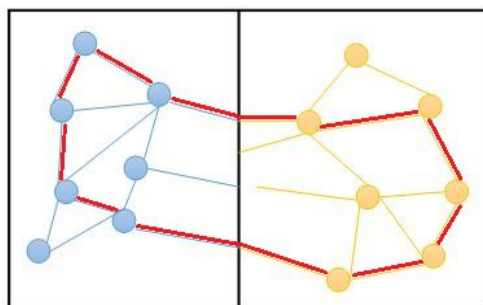


Figure 20: Systematic representation of roads

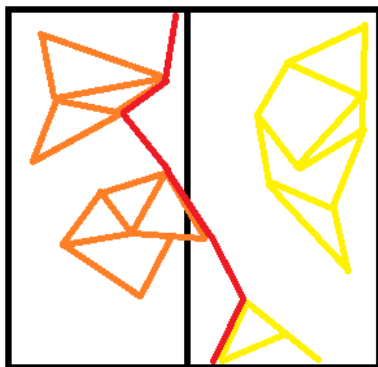
by car on small roads. The representation of roads (for motorised vehicles) is shown more clearly in the schematic of figure 19: Each state has its own roads. The smaller roads are shown in blue and yellow, representing the road networks in the two states. The large roads are shown by the added red line. One can see that only the red roads cross the border, and that the small roads may lead to the border, but that they don't connect for motorised vehicles. This means that both on the Dutch and the German side one can only cross the border at the large roads, or by bike or foot on the smaller roads. Looking towards a more inland (i.e. coherent) region one can see smaller roads connecting as well, thus the disconnection between smaller roads at the border can be attributed to the national border functioning as a barrier. This shows that the roads are part of two different networks, which is supported by the fact that they are also maintained by respectively the Dutch or German manager.

## 5.3 Multinational tourism

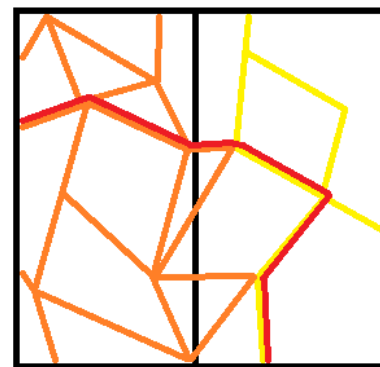
Tourism in the area of the Witte Veen is represented by hiking routes, biking routes, border landmarks and the central location of the Haarmühle. When perceiving the Haarmühle as part of a tourism network, one can see that both customers and staff come from the Netherlands and from Germany. The location is not focused specifically towards one side of the border, but is connected to both states through networks and shared information. The origin of the Haarmühle as a bi-

national location lies with its history, through which it has profited largely from its location near a border. The location of the Haarmühle as an establishment is also used often by managers (both NL and D) of the Witte Veen for meetings.

In the Witte Veen one hiking network was encountered, which was provided by Regio Twente. The German side does not have a hiking network or route in the area because its natural area is not accessible for hiking or biking. The Dutch hiking routes cross the border in order to start at the Haarmühle. It is not uncommon that hiking networks do not connect, because people walking a hiking route are not interested in hiking routes longer than 20 kilometres (Van Den Heuvel, 2016). For people that are interested in longer hiking routes so called long-distance hiking routes are available such as the Noaberpad. This route does cross the border into Germany several times, it however remains an initiative of a Dutch organisation, which is not linked to German organisations. Figure 21 shows a systematic representation of hiking networks. The networks are located mainly in one country, the red line is a long distance route. The shorter hiking routes are shown in yellow and orange. Although the orange network does cross the border, it does not connect to the yellow network. The origin of the disjunctures in hiking networks can be related back to the fact that hiking routes have historically not been influenced much by borders since routes could cross the border at “green” border crossings. Furthermore hiking routes such as the Noaberpad were attracted specifically to the border region because of its rare nature. That such longer routes don't show network connections across the national border can be attributed to the Dutch and German organisations having different backgrounds, norms and values (De Boer, 2016).



*Figure 21: Systematic representation of hiking networks*



*Figure 22: Systematic representation of biking networks*

In the Witte Veen there are also biking routes, provided by the Dutch “fietsknooppuntennetwerk”. It has been decided to connect these Dutch “knooppunten” to the German network<sup>34</sup>. The abstract representation of this connection can be seen in figure 22, where the orange network connects to the yellow network. Nevertheless the Dutch and the German biking networks are not the same network; they have different backgrounds, are managed by different institutions and show no profound other connections (e.g. cooperation between managers) than the physical connections at the border. The cross border route that is found in the area is the “Flamingoroute” (shown in red in figure 22), a long distance biking route. It is a German initiative, which has been supported by multiple organisations and has been funded by Euregio. At the moment the unclarity of primary responsibility for the route leads to a deterioration of the maintenance, which is now often cared for

<sup>34</sup> Because of the connection of the Dutch network across the border one can find Dutch information signs across the border.



by local businesses near the route, since they feel the route may contribute to their profit. Since people can bike longer distances than they can hike, the biking routes cover the whole schematic area. The routes do connect, but are part to different systems as shown by the different colours.

For many years border landmarks have been the subject of deterioration, especially since the opening of the internal European borders. In the current context of the Witte Veen, border landmarks have however also been explained as touristic attractions in the landscape. On a micro scale this has led to the increase in (plans for the) local maintenance of some touristic historical locations. The result of such local initiatives can be seen in hiking or biking routes leading past border markers, or in protection of a border stone as could be seen in figure 8. It has not been possible to distinguish different networks of border markers (e.g. shown through different border stones, or different customs houses) between Germany and the Netherlands, which is logical since they mark the border (one line between nations) between these two nations. A difference was however found through looking at the numbers of the border stones. The eastern border of the Netherlands is enclosed by two types of border stones with different numbers, of different ages. This difference originates in the time that Germany did not exist yet; the high numbers in the area are stones from the border with Prussia, the low numbers are the stones from the border with Lower Saxony. This shows a historical disjuncture in border demarcation, that has been dealt with by adding high numbers to the stones with lower numbers. The attraction of tourism to these border landmarks in the region however does not show a disjuncture as a result of the border functioning as a barrier<sup>35</sup>.

#### 5.4 Nature and water stop at the border

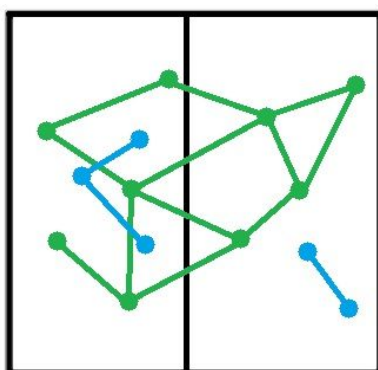


Figure 23: Systematic representation of nature

The physical disjuncture<sup>36</sup> of nature can be separated into two origins: natural conduct or human influence. Nature itself does not choose to follow national borders when these borders are only created through a line on a map. This can be seen through the boars and roes entering Dutch (farm-) lands from Germany, or birds flying across the border without having to go through customs. At the Witte Veen nature does not seem to show a physical disjuncture in such a manner. Human influences however can make nature appear to follow man made barriers such as the national border. In the area of the Witte Veen it can not be said that there are two separate networks of nature, since flora and fauna are not bound to nations. There are however some examples of species existing on one side of the border in the Witte Veen and not on the other. This is the case for the great crested newt, as well as for Heck and Highland cattle. The newt exists on the Dutch side of the border, and not on the German side. Because it is a small creature, it does not have the range to travel as a roe or a deer (green in figure 23). Therefore existing colonies may not connect, as can be seen (blue) in figure 23. The man-made disjuncture exists in the focus of the managers: on the Dutch side the newt is

35 Management of information provided to tourists has however shown a network disjuncture: Dutch folders are offered in the Netherlands, and German folders in Germany. This disjuncture exists even though it was explained that the creation of folders did not solely depend on the nature managing organisations (because of this other organisations could also provide the folders), but also on funds such as subsidies available.

36 Although most of what I found were clear disjunctures, this does not mean there are no benefits to the neighbouring areas of Witte Veen – Witte Venn. The natural area profits from its neighbour on the other side of the border, since it makes the whole area more interesting for nature: the area is wetter. This is seen when comparing the Witte Veen to the Krosewicker Grenzwald; that borders to farmland in the Netherlands and its soil is because of that much drier.



protected, on the German side it does not exist in management perspective. Where for the newt the disjuncture exists because man does nothing, for cattle the origin of the disjuncture lies with active involvement: the placement of a fence along the border to separate land and cattle. Management has consciously created a barrier at the border, to prevent cows from crossing or mingling.

Even though the natural area the Witte Veen exists on both sides of the border, it can be thus seen as two separate natural areas. This can also be seen in the Nature 2000 statuses of the Witte Veen (NL) and the Witte Venn (D)<sup>37</sup> as well as in the purpose of the management of the natural areas<sup>38</sup>. That the natural areas each have their own (different) status creates the necessity for individual approaches towards the protection and maintenance of the natural area. The result of these different approaches can be seen in the protection of species as well as in the accessibility of the natural areas. In the Witte Veen (NL) one can access hiking or biking routes, but little information about the natural area is present in the area. The Witte Venn (D) is closed to visitors, but observation cabins as well as information signs are placed on multiple occasions near the natural area. These differences are a result of different management styles, but do not only exist in people's minds; they are observable differences in the landscape. Furthermore they create observable disjunctures between the natural areas of the Witte Veen.

### 5.5 Management and strategy

The research has focused on physical characteristics, in order to understand the (lack of) bottom-up coherence of networks at the border. Next to physical networks also non-physical networks have been found in the area. Some of the non-physical networks do not show a direct (visible) connection with physical characteristics in the landscape. Examples of such non-physical networks are rules and regulations, but also management, politics and strategy, of which often only resulting effects can be determined.

The difference in legal networks in the Witte Veen can be seen by looking at hunting laws (in Germany one is allowed to hunt, in the Netherlands not), or property law (e.g. privately owned roads). Often such rules and regulations are not area specific, but are the same for a municipality or a larger region. Nevertheless they also influence the micro and nano border, as can be found through complaints of farmers about the nuisance of wild animals in the Netherlands, or difficulties as experienced by a long distance route when planning a route across a privately owned natural area. Next to differences in rules and laws, disjunctures can also be found in management, politics and strategy.

In order to further understand these disjunctures figure 24 (Liqua, n.d.) is introduced. In this figure one can see two heads as introduced by Latour

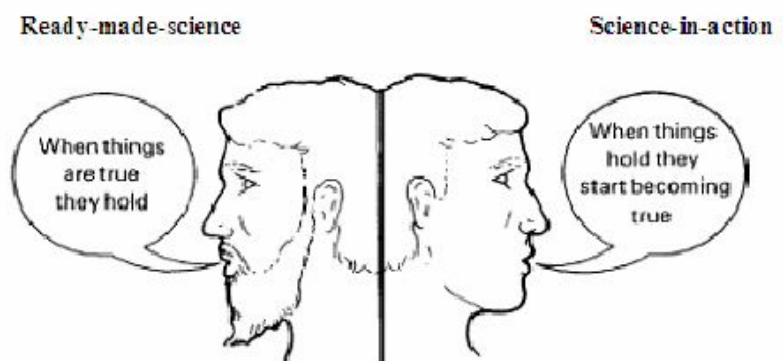
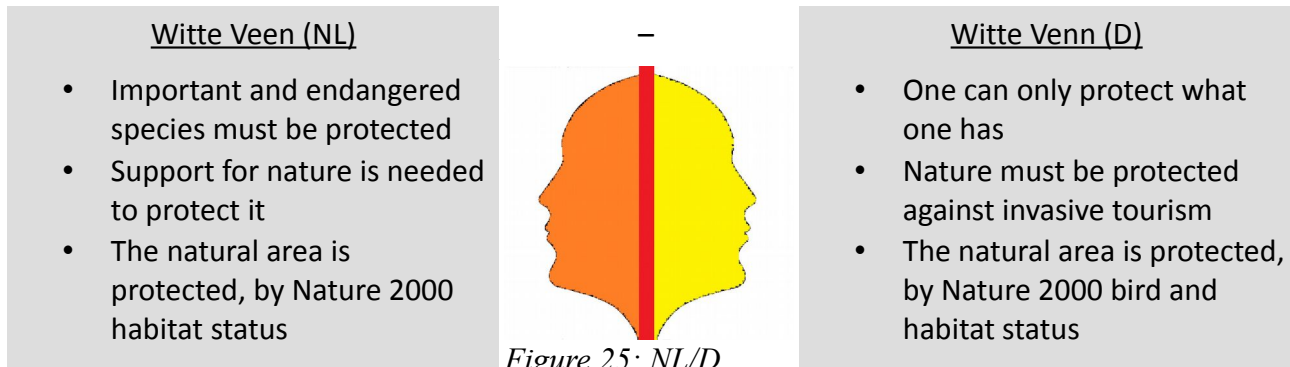


Figure 24: Latour's approach to science

37 The Dutch natural area is habitat Nature 2000, whereas the German natural area is both habitat and bird sanctuary.

38 This also includes the management of water around the natural areas. The different approaches of Waterschap Vechtstromen and Kreis Borken in the management of the Hegebeek can lead to clear disjunctures in the flow of the water across the border; natural flow on one side and a canalised flow on the other.

(1987)<sup>39</sup>. Such opposite opinions have been observed in management and strategy of the Witte Veen as well. The summarised disjunctures can be found next to figure 25. These contrasting opinions supported the understanding that the Witte Veen existed in fact of not one but two natural areas.



*Figure 25: NL/D*

The national border can be seen as a thick red line creating disjunctures in management. On both sides of the border different contradictory opinions exist. These opinions don't cross the border, they are part of their own networks of thoughts and beliefs. Contact between managing organisations is often established, but does not seem to lead to a mix or agreement in principles or opinions.

Disjunctures in management strategy and politics can be seen when looking at prior discussed networks such as hiking and biking, maps, nature or water. Even though sometimes cross-border connections are used to reach agreements, the weak connection between the networks allows execution of agreements to be omitted<sup>40</sup>. The organisations managing the area are also part of different networks; Kreis Borken is a governmental institution in Germany, Natuurmonumenten is a public association in the Netherlands. Many of the organisations managing the Witte Veen are also influenced by politics. The Dutch water board is e.g. elected by public vote every few years, and local initiatives of managers have to keep in mind the wishes of the local people (e.g. communicated through the local council). When looking at such a council it has however been said that the perspective of politicians is often inland instead of looking for opportunities across the border<sup>41</sup>. Euregio is the main designated organisation to overcome local disjunctures, it is however not a cross-border governing organisation; it acts if and when its members desire it, demanding some level of cross-border interest from local politicians. The national border acts as a fracture between the political organisations on both sides of the border. Such organisations have been built from municipalities to provinces and states, and all of their outer borders are located in the same place: the national border. The design of the political systems is quite different across the border, and the division of tasks and responsibilities is as a result dissimilar. Thus even though the municipality of Haaksbergen is part of other networks<sup>42</sup>, all of these networks have the same border

<sup>39</sup> In the original article the heads were used to explain differences between approaches towards science. It was used to show how science can have two faces and although these faces were talking about the same thing, they held opposite opinions.

<sup>40</sup> An example of such an agreement is the case of the Hegebeek, located to the north of the Witte Veen, which is at the moment mostly comparable to brooks in Germany. The plan is however to make it more like the Dinkel (i.e. more natural and stippling). This plan is supported by the Dutch “kaderrichtlijn water”. On the German side such perspective towards the management of water seems to be much less important. Cross-border agreements have been reached, but have not been executed.

<sup>41</sup> In my interview with Rouwenhorst it became clear that politicians don't only stand with their backs to the national border, but also to smaller inland borders (e.g. the border with another municipalities, another region, another province, or any other border). This can be overcome by borders from different institutions such as the water boards and the provinces not overlapping.

<sup>42</sup> It is part of Regio Twente, of Provincie Overijssel, partially part of Waterschap Vechtstromen and Waterschap

in common. This results in a thick national border, leaving cross-border connections very weak or sometimes even absent.

## **5.6 Bottom-up developments at the Witte Veen**

There are some cross-border connections between the networks found at the Witte Veen. These connections however remain part of larger regional or national networks and initiatives. In the case of maps and roads one can see that primarily the large roads remain connected across the border. In the case of hiking and biking routes one can see that the cross-border routes are one-sided initiatives and that the networks, although sometimes connecting, do not cross the border. This leads to the conclusion that although from a national or regional perspective one can argue that cross-border regions are integrating, from a micro or nano perspective this is not the case: regions are not as integrated as one would expect from a coherent (e.g. inland) region. There are however examples of successful bottom-up integration at the Witte Veen. This can be seen when looking at the Flamingoroute: the organisation that has created the route has left a vacuum for maintenance responsibilities, benefits such as economical profit and attractiveness to tourists have led local businesses to continue maintenance of its information signs (Van Den Heuvel, 2016). Another sign of bottom-up integration can be found at the Haarmühle where, next to a nationality-mix of staff, demand of tourists has led to an offer of both Dutch and German foods and beverages. Within management some bottom-up processes can also be distinguished such as the inclusion of local individuals in decision making processes through information and “kitchentable” meetings (Koop, 2016; Meulenbroek, 2016), which has led to broader support and understanding of decisions. Furthermore the region is attractive to both Dutch and German tourists, which has led to bilingual information being provided both at the Witte Veen and in information folders. Local plans have also been made for re-establishment of more historical border markers, such as customs houses or hiking routes alongside border stones. Taking the development of bottom-up border elimination one step further there are many more possibilities to improve integration across the border. One can think of integration of parties with common goals (e.g. politicians or nature protecting organisations, or the local sports competition), combining strategies and management plans<sup>43</sup>. Cooperation across the border could develop to be no longer dependent on regional or national political agreements when bottom-up opportunities are seized more often.

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RijnIJssel.

43 One can think of many more opportunities for cooperation across the border, depending on the creativity and willingness to leave behind standard procedures and old habits. Perhaps in the future Regio Twente will be a direct partner of Kreis Borken, perhaps they may cooperate to become one region. National borders may become historical remnants of the past when local cross-border cooperation ignores top-down national barriers and local cross-border integration is actively supported.

## 6 Dimensions of Network Disjunctures

In order to understand the possibilities of bottom-up integration across borders it is important to understand the border effects that have been found at the border. In diagnosing the networks according to the bottom-up border effect model, all five dimensions of border effects have been identified in the area of the Witte Veen.

In the following paragraphs the stylised networks will be diagnosed in terms of border effects. This means that the found disjunctures in networks will be compared with the theoretical dimensions. Through this comparison an explanation can be given for the observed characteristics and how they were created as a result of the border. The disjunctures between networks will be categorised in terms of the five dimensions of border effects. The five border effects are presented in the table below, the first column provides the dimension of the border effect, the second provides the local border effect as described in the theory and the third column shows the found disjunctures in networks and physical characteristics.

<i><b>Dimension</b></i>	<b>Border Effect</b>	<b>Observed Disjunctures</b>
<i>Physical</i>	<p><b>Micro:</b> Differences in a small environment caused by natural or human influence such as differences in flora and fauna or disjunctures in road networks.</p> <p><b>Nano:</b> Individual characteristics created by the national border present in the landscape. Barriers caused by the national border influence cross-border movement.</p>	<p><b>Maps:</b> non-compatible map programs</p> <p><b>Roads:</b> no small cross-border roads, primarily Dutch hiking and biking networks in the Witte Veen</p> <p><b>Tourism:</b> Elements such as border stones, customs house and border gate at southern border crossing. Integration: products at the Haarmühle</p> <p><b>Nature:</b> fence at the border to separate cattle</p> <p><b>Management:</b> Maintenance of Flamingoroute by local business owners</p>
<i>Economical</i>	<p><b>Micro:</b> Labour market and businesses are influenced by differences across the national border, because of which clusters (businesses, houses, jobs) may form at the most profitable side of the border.</p> <p><b>Nano:</b> Individual benefits (e.g. jobs, better products, cheaper holiday) can influence a person to (not) cross the national border, leading to local cross-border migration.</p>	<p><b>Maps:</b> High price of specialised cross-border maps</p> <p><b>Roads:</b> Border elimination only at large cross-border roads</p> <p><b>Tourism:</b> disjuncture in cross-border information provision on signs and folders. Integration: staff and customers of multiple nationalities at the Haarmühle</p> <p><b>Nature:</b> No buy-out of farmland due to extra taxes</p>
<i>Social</i>	<p><b>Micro:</b> No societal mixing. Clubs and social organisations will not cross the border (e.g. due to different languages, rules, norms and values expected of</p>	<p><b>Maps:</b> Google Streetview only available in the Netherlands</p> <p><b>Roads:</b> No roads in Witte Venn (D)</p> <p><b>Tourism:</b> information available in</p>

	members). <b>Nano:</b> Individuals will not have a cross-border social network, social movement will thus be limited by the national border.	multiple languages <b>Nature:</b> Different interpretation of management of nature and water (e.g. newts, the Hegebeek & hiking paths) <b>Management:</b> cultural differences across the border as experienced in hierarchy and norms and values
<i>Political</i>	<b>Micro:</b> Parties, institutions and organisations stop at the border. There is little cross-border cooperation between parties, institutions and organisations. <b>Nano:</b> Politicians, managers and employees work on “their own” side of the border, leading to disjunctures in cross-border projects (e.g. a line on a road due to a difference in pavement at the border).	<b>Maps:</b> Stacking of governmental borders at the national border <b>Tourism:</b> Different (types of) institutions manage hiking and biking routes differently. Flamingoroute. <b>Nature:</b> Witte Veen (NL) and Witte Venn (D) are two separate Nature 2000 areas <b>Management:</b> Different rules and legislation (e.g. hunting)
<i>Psychological</i>	<b>Micro:</b> Groups of people have the same beliefs, based on preference or prejudice, about the other side of the border. <b>Nano:</b> Individual decisions and opinions about the other side of the border. Preferences based on individual experiences and influences.	<b>Maps:</b> colours on maps (history) <b>Roads:</b> names of roads at the border (e.g. Twistveenweg) <b>Tourism:</b> hiking and biking routes, border as a museum <b>Nature:</b> Newt protected in NL <b>Management:</b> inland perspective of politicians

## 6.1 Physical border effects

The physical border effect as described in the theory is a disjuncture in movement and fixed elements in the border region as result of the national border functioning as a barrier. Disjunctures have been observed both in fixed element as well as in cross-border movement. Elements that can be diagnosed as physical border effects are the disjunctures in hiking and biking networks, the border stones and the customs house at the southern border crossing. Furthermore the fence separating the cattle, the roads ending at the border and the non-compatible map making programs may lead to decreased cross-border movement. Signs of bottom-up integration were visible in the product assortment of the Haarmühle as well as in the maintenance by locals of information signs of the Flamingoroute.

When looking at the hiking and biking networks the disjuncture is shown in the networks being bound to different nations. Although the biking networks connect at the border and the hiking networks seem connected through the long-distance hiking routes, the signs provided are either Dutch or German. Furthermore in the natural area of the Witte Veen only Dutch routes were available. When looking at roads the possibility to cross the border at smaller roads while driving a car does not even exist. This means that one is limited to cross the border at the larger regional or national roads, showing a clear physical disjuncture in the micro and nano scale of the Witte Veen

road network. And even though the border has been opened more than 20 years ago there seems to be no plan to open the smaller cross-border roads, rather more roads have been closed as could be seen on the historical maps. The fence separating cattle is a nano-scale physical disjuncture: it stops the herds on both sides of the border from physically crossing the border, or interacting with one another<sup>44</sup>. The customs house had such a function when it was built, it could function as a barrier to movement. After the national borders have been opened it became obsolete in this function, making it possible for other parties to use the building (e.g. as a shop at the border). Border characteristics such as these have however gained the function of historical remnant, which has made them interesting characteristics for tourism. In their current function they no longer pose as a direct barrier between the two regions of the Witte Veen. This also seems the case for the border stones observed in the region, although these stones of course still function as a sign of the national border. Next to the negative border effects also signs of border elimination and coherence in the region of the Witte Veen have been observed. This can be seen at the location of the Haarmühle, where tourists can find information about the Witte Veen in this area. The Haarmühle also functions as a junction for hiking and biking routes from both the Dutch and the German side of the border. Another sign of bottom-up integration can be found with the Flamingoroute, the lack of clear responsibilities has left locals to pick up some necessary maintenance.

The physical border remains observable through historical remnants and physical barriers, which can make it difficult to cross the border in the same manner as one would cross a coherent inland region. Although the function of the border has changed over time, this has not led to simply erasing the physical barriers and disjunctures. Next to the new function of the border creating more possibilities (as exploited at the Haarmühle), it has also led to rebordering practices as could be seen at roads and ignoring possibilities as could be seen with information provision and cooperation for maps. These micro and nano examples show the influence of bottom-up development. Where locals could profit the bottom-up elimination of the border was initiated, but when such benefits were not clearly present the border remained the same or could even be thickened. It is evident that even though national cross-border agreements have had an effect on the physical appearance of the area, there are still local micro and nano borders in place. Next to that the disjunctures encountered were often not the result of only a physical border effect. The following paragraphs will explain found disjunctures in terms of the other four dimensions.

## **6.2 Economical border effects**

The economical border has been described as a barrier to flow of economical activity as found in cross-border transactions and disjunctures in market structures as visible through labour division. Historically seen a border could contribute to activities such as smuggling. Smugglers would profit from the border through illegally importing or exporting goods across unsurveyed parts of the border. The opening of the internal borders of the EU has made most of such activities superfluous. Recent disjunctures that can be diagnosed as a result of economical border effects are related to the networks of nature, tourism, roads and maps.

The Haarmühle is a location at which both tourism and labour are integrated across the border. Labour has been attracted from both the Dutch and the German side of the border in the form of staff as well as offered products. Because of this cross-border integration the Haarmühle is able to profit both from the Dutch and the German side of the border, as can also be seen through the

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<sup>44</sup> This was however also already somewhat achieved by the natural barrier of the wet area in which the fence was placed.

festivities of both nations that are held at this location. The mix of nationalities of staff at the Haarmühle however does not seem to translate to the surrounding area, where there is still a clear disjuncture in vacancies in Nordrhein-Westfalen and unemployment in Twente (Rouwenhorst, 2016).

It can generally be seen that characteristics of the border contribute to an increase in touristic activity at the border, which can lead to an increase in economic activity. Next to direct economic value in spent money, added value can be seen in the Witte Veen becoming a quiet region attractive for people in search of relaxation. The networks supporting tourism (e.g. hiking networks and tourism information) are however disjointed, leading to higher costs for the double work (multiple information folders, two types of information signs). These higher costs as a result of disjointed networks can also be seen in the specialised area of map making. Due to the disjuncture in programs used, it is expensive to create a cross-border specialised map. The lack of cross-border map making programs is however an issue which relates to the national map network. It however also affects the local possibilities for cross-border cooperation at the Witte Veen through the increase in expenses.

This lack of local cross-border possibilities was also seen in the example of the German farmer farming to the north of the Witte Veen (NL). Due to extra expenses needed to buy and sell land in Germany while letting Natuurmonumenten acquire the farmland it has not been possible to relocate the farmer. This shows how the border effect of economical and legal disjunctures across the national border affect the micro region of the Witte Veen, where the negative effect of the border still needs to be eliminated. Border elimination has also been the case for the large cross-border roads, but the lack of bottom-up border elimination has led to a disjuncture between the smaller road networks. Generally it can be said that the economical dimension can be seen in a disjuncture in the regional labour markets, although this is not the case for the nano level of the Haarmühle. Clusters of businesses in the Witte Veen are not visible, and Haaksbergen and Ahaus still have their own business areas. Economic activity in the area is mainly built on tourism. Although tourists may seem to cross the border easily on the large cross-border roads, there are few to no connections in the natural area of the Witte Veen. Furthermore the networks supporting tourism exist separately in each nation.

### **6.3 Social border effects**

Social border effects relate to disjunctures in norms and values, which create barriers to mutual understanding. An obvious disjuncture is found in languages spoken across the border. Over the last few years this seems to have followed a rebordering development, increasing the language disjuncture through focussing more on national languages than on regional dialects<sup>45</sup>. Due to differences, such as different ideals, different hierarchy of organisations, as well as different opinions of what is most important, communication and execution of agreements is hindered. Within the region of the Witte Veen objectives between different actors clash, nevertheless cooperation across the border seems to lack initiative. Differences between these actors are also handled differently: in Germany nature is protected through closing the area (i.e. no roads), in the Netherlands support for nature protection is sought through informative meetings and opening (parts of) the area to the public. The effect of these strategies has also had a physical effect in the

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45 To overcome language differences, often bilingual information is provided. This however also is part of integrating the languages spoken in the EU (folders are available in multiple languages), and is not connected to local border problematics. Furthermore there are plans to create information signs in the area managed by Natuurmonumenten in not only Dutch and German but also English.



natural area, as can be seen by the lack of roads in the Witte Venn (D) and the monopoly of Dutch hiking routes in the Witte Veen (NL).

The different interpretation of nature protection can be retrieved to a basis of different norms and values, as was presented in figure 25. These differences lead to a lack of mutual understanding, as could be understood from de Boer when he mentioned a meeting between the Dutch and German labour organisations (Germans wore uniforms and addressed each others by title, Dutch did not). Disjunctures in mutual understanding also lead to unpractical compromises as could be seen in the example of Waterschap Vechtstromen, waiting for the German water board to create an overflow area. Another example is the one-sided availability of Google Streetview as a result of stricter privacy norms in Germany than in the Netherlands. The issues encountered in the area of the Witte Veen often relate back to the organisations managing the area. Many organisations have been created to manage parts of the area, but the authority of all of these institutions ends at the border.

Although tourists cross the border and employment is no longer restricted to either side, the border does still lead through social networks such as labour organisations, or nature managing associations. Between the existing organisations the disjuncture in norms and values can be observed through their different practices and strategies. Even though the border has been opened social networks don't seem to extend across the national border, which seems to support the lack of bottom-up integration.

#### **6.4 Political border effects**

The border can lead to the effect that political perspectives and strategies are not aligned, which would lead to barriers in cooperation due to differences in organisational structure. As explained above differences in hierarchy have led to difficulties cooperating across the border in the Witte Veen. The Witte Veen furthermore shows a thick stack of institutional boundaries at the border, due to organisations and legislation not crossing the national border. There is little political cooperation across the border. Euregio is the only cross-border organisation created to support cross-border communication and cooperation active in this area. The disjuncture at the border exists because of different networks of organisations on both sides of the border showing little interest in communication or cooperation across the border. These disjunctures could be found in maps (created by different cadastres), hiking or biking routes (created by different organisations), nature (different Nature 2000 statuses) and of course management and strategy that lead back to the different institutions managing the area.

The different political networks in the Witte Veen function as a stack of local, regional and national borders<sup>46</sup>, between not only different types of governmental institutions, but also different types of organisations and associations. This bottom-up disintegration can be seen by looking at the route-networks for hiking and biking or the policies formed about nature. Both sides of the border have different statuses; both sides of the border are part of different networks and both sides of the border follow different rules and plans. The result of these differences can be seen in the rules and plans in the area (e.g. different Nature 2000 statuses, different hunting rules, or different accessibilities of the Witte Veen natural areas). Different strategies and objectives lead to a barrier in cooperation.

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<sup>46</sup> This is shown when looking at the municipalities on both sides of the border: Haaksbergen is part of Regio Twente (semi-governmental), Provincie Overijssel and the Netherlands, Ahaus is part of Kreis Borken, Regio Munsterland, Bundesland Nordrhein Westfalen and Germany. The only organisation focused on cross-border cooperation is the Euregio, but this has no governmental status.

This can be seen in the attitude of managers and politicians as referred to as “standing with their backs to the border”, which can be interpreted as a disinterest in everything across the border. As said this did not only relate to the national border, it is the case for all political borders. The stack of political and institutional borders at the national border however does create the effect of a thick political border, since there is equally little incentive to change habits and look for opportunities across the national border as there is with regional and local borders.

The process described in the theory of bottom-up borders can be found in the area of the Witte Veen. On a micro level parties and institutions end at the border and on a nano level people seem to only “mind their own business”. Disjunctures in cross-border projects can be seen in the lack of knowledge or interest of local managers and politicians of what is happening “at the other side”. Euregio has explained that the focus is not to integrate across the border, but eliminate the negative effects of the border. There however seems to be no initiative to eliminate the institutional barriers that resulted from the national border and still obstruct bottom-up cooperation and communication across the border.

## **6.5 Psychological border effects**

The final border dimension relates to individual experiences and beliefs which can lead to cross-border prejudices. Psychological effects have also been observed in the networks of maps, roads, tourism, nature and management. On maps one can see result of the belief that the other side of the border is less important; it is shown in less detail, less colour or may be omitted completely. This belief was also visible in attitudes of politicians and managers, focusing on their “own” regions. Disputes about the border can be found in the names of the roads in the area. Although these days these disputes seem remnants of the past, their history may be one of the influences on the many networks disconnecting at the border. Disjunctures have furthermore been found in the protection of the newt in the natural area and in the compatibility of hiking and biking routes. Hiking and biking networks are not well compatible in the area; before a route can be travelled both types of networks (NL and D) have to be understood. This creates a psychological barrier between the two networks: if one was to hike or bike in an area it would be more likely that due to this extra effort needed the border between the networks would not be crossed. On the other hand the physical characteristics of the border have also led to the psychological attractiveness of the region for tourists, interested in the visible line between two nations; These tourists can experience the border as a museum, and photograph a border pole as something exotic. The importance of this attractiveness can be found in the plans for border tourism such as a border stone hiking route. Next to the attractiveness of border characteristics such as border stones and a line on a road, the area is also attractive due to its quietness (and e.g. less amount of 'radiation'). This characteristic has shown to be a result of the border area being historically vague and due to that peripheral.

In the area of the Witte Veen several psychological effects have been observed that may relate to more types than only the national border. The focus on the own side of the border furthermore does not directly create a preference about the other side of the border, because of which it is more difficult to determine whether it is an effect of the national border at all. Individual decisions and opinions have led to tourism to the border region. Although influenced by the border being a quiet and radiation-free region, the physical shows only small disjunctures between the two sides of the border.

## **6.6 Summary of analysis**

Concluding the analysis it can be said that the physical characteristics observed in the landscape of the Witte Veen have led to a diagnosis in which all dimensions of border effects have been encountered. Characteristics observed in the case study have been stylised into disjunctures found in five types of networks (maps, roads, tourism, nature and management). These networks have been explained in terms of border effect dimensions. Although the physical characteristics of the border have been the focus of this thesis, the effects have been divided nearly equally over the dimensions of border effects. The political effect has shown a large influence in creating disjunctures at the border through differences in management and organisations. The peripherality of the region has made nature at the border an interesting landscape with new economic possibilities. This has however not led to the region becoming as integrated as a coherent inland region. The border has acted as a barrier to the bottom-up integration of networks, it has created an inland focus because of which there is little demand for cooperation or communication across the border.

## 7 Conclusion and Discussion

Over the past centuries the meaning of the border has changed. The effect of the border has created disjunctures in the cross-border landscape. Elimination of negative border effects can be achieved through bottom-up cooperation and integration of top-down agreements with micro and nano experiences in border regions.

In this thesis the answer has been sought to the question “*What are the effects of the national border on the landscape of the Witte Veen?*”. Physical characteristics of the border have been identified, the origins of these disjunctures have been examined, the characteristics have been related to overarching networks which in turn have been identified in terms of dimensions of border effects. In some examples the border has developed a new function, perhaps it even has become thinner, but more often the border has functioned as a barrier to integration, communication and cooperation. The opportunities created by the EU have not led to an automatic positive effect on the micro and nano level of the national border. Each side of the border still manages its area separately from the other side of the border, and although some cross-border connections exist, they have not eliminated the border nor do they create a coherent region. Where other literature has developed ways to describe effects of the border, this research has shown the importance of including bottom-up development (thus including all levels of the pyramid) in the elimination process of negative border effects. Micro and nano levels of the national border affect the cross-border regions and the thickness of the border is not only influenced by different border effect dimensions, but also by (a lack of) bottom-up integration.

The disjunctures found in the area of the Witte Veen have indicated that the national border creates a thick institutional border. This institutional border does not only exist in communication or cooperation, but it has affected the physical landscape, creating in effect two separately managed areas. Disjunctures in the networks of maps, roads, tourism, nature and management have been explained by multiple border effects, and all dimensions of border effects (physical, economical, social, political and psychological) have been found at the area of the Witte Veen. The most remarkable finding of the research was that of the influence of stacking borders. The lack of communication, cooperation and integration across the border can be explained by the border functioning as a thick barrier between management networks. This barrier is also a result of a lack of bottom-up cooperation across the border. The governmental borders of municipalities, regions and provinces all end at the national border, as is also the case for non-governmental organisations such as nature protecting associations, or labour organisations. These political borders that function as a thick barrier also leads to a lack of knowledge about “the other side”, increasing the social disjuncture at the national border. The effects of the national border encountered in the Witte Veen are the result of a lack of bottom-up involvement in the elimination of the border. It is too easy for actors in the area to turn their backs to the border, even though they manage the organisations that created the institutional barriers and the responsibility to eliminate the negative effects of the border should thus also be theirs. In order to understand the connection between the political dimension and the national border functioning as a barrier more research is needed. A focus on institutional barriers leading to a lack of cooperation is advised (with as unit of analysis the managers of border regions).

From a European perspective the importance for further research into the effect of borders on micro and nano barriers can be found in the persistence of borders as barriers between nations (Andreas, 2003; Strüver, 2005; Van Houtum, 2002). This research has shown that the national border persists to

exist in a micro level border landscape, leading to multiple border effects. In order to eliminate these effects cooperation is needed on a micro and nano scale: from the bottom-up. In cases, such as the staff, products or customers of the Haarmühle, and the local maintenance of the Flamingoroute, where bottom-up activities were attempted one could see successful elimination of the border. In an attempt to explain this micro and nano bottom-up elimination of the border this research has found economical benefits as motivation (maintenance of Flamingoroute may lead to more tourism; higher income from tourism), further research can explain underlying motivations more exhaustively.

When I started my research I expected that the goals of the EU were to “eliminate” local borders, which would be an instrument of European integration, and that it was successful in doing so. This expectation was incorrect. The primary goal of the Euregio is to overcome negative effects that are a result of national borders. The EU does not play a managing role in this area, but mainly supports cross-border initiatives with information and funds. Throughout my research I have wondered whether this is a realistic goal for the EU, or whether it will result in an ever lagging attempt. European integration strategies are agreed upon, expecting the border to remain the same up until these top-down agreements can be executed. This leads to development always being one step behind: change what was yesterday in stead of adapting to what will be tomorrow. The border has however already adapted to new functions. Even though border characteristics such as border stones, border gates and customhouses may remain in one place for many years, the meaning of these physical border characteristics is not as fixed: from a barrier to physical movement it has adapted the function of customs houses to museum attributes. Progress should thus be dependent on local developments, in stead of waiting for international accomplishments.

Many of the physical disjunctures in the landscape can be traced back to top-down decisions of managing organisations and the fact remains that managing networks are different per memberstate. The elimination process of the EU has been created from the top-down. It has attempted to rid itself of negative border effects by reaching international agreements. Borders however only theoretically exist between nations, in practice they are lines between two regions (Paasi, 2002). This has led to a disjuncture in implementation of these international agreements: national networks such as roads are connected, and effort is made to create a coherent internal EU market. It can be expected that this international coherence of economy has led to a more profitable market for companies such as multinationals, but the local border still proves to be a barrier to local employment and businesses as could be seen in the industry areas of Haaksbergen and Ahaus. Cooperation across the border is important for improvement of the region. In some cases increased cooperation is given a chance, but more often local budget cuts are made on cross-border communication, cooperation or integration. The European integration strategy depends on the border remaining the same, which does not only lead to development being one step behind: it makes the elimination of negative effects of the border a slow process: tying the hands of local managers, allowing them to turn their backs to the border. Europe has created a safe setting for negligent attitudes towards the border. The focus of the EU should shift more towards bottom-up elimination of the border as a powerful ally to the already reached top-down agreements. The focus should be on a specialised approach, since differences in regional benefits should be taken into account. This would mean not starting on an EU level with national ministers, but searching for the regional and local keys to cross-border cooperation.

The border landscape has been reshaped from peripheral wilderness into appreciated nature, and where it used to be a dangerous zone, it has become a recreational area. The national border still affects its cross-border region as a barrier. The border leading through the area of the Witte Veen is

not only a fence between two herds, it is a thick stack of local, regional and national borders. This stack of borders has led to disjunctures between both sides of the border, as found in the physical landscape, but also in management strategies. So what are the effects of the national border on the cross-border landscape? The effects of a national border can be divided into five dimensions of border effects. All of these dimensions have been observed in the area of the Witte Veen. The consequences of the border are furthermore found in the lack of cross-border bottom-up cooperation. This lack of bottom-up cooperation leads to a persistence of the border, as could be seen in the thick political barrier.

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## Annex

### *List of abbreviations*

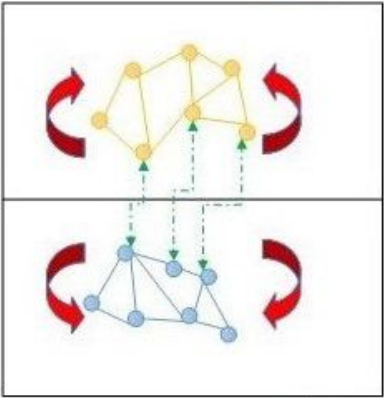
Abbreviation	Meaning
D	Germany
DG	Directorate General; sort of ministry of the European Commission
ECJ	European Court of Justice
ECSC	European Coal and Steel Community
EEC	European Economic Community
e.g.	Exempli gratia; for example
EHS	Ecologische Hoofdstructuur
ERDF	European Regional Development Fund
EU	European Union
E.V.	Eingetragener Verein; registered association
IvAO	Instituut voor Arbeidsontwikkeling
KRW	Kaderrichtlijn Water
LAW	Lange Afstands Wandeling; long-distance hiking route
n.d.	No date
NIVON	Nederlands Instituut voor Volksontwikkeling en Natuurvriendenwerk
NL	The Netherlands
NRW	Nordrhein-Westfalen
PAS	Programmatistische Aanpak Stikstof
SEM	Single European Market
VVV	Vereniging voor Vreemdelingenverkeer; Dutch Tourist Information
Witte Veen	The cross-border area of Witte Veen (NL) and Witte Venn (D)
Witte Veen (NL)	The Dutch natural area of the Witte Veen, approximately 3 square kilometres
Witte Venn (D)	The German natural area of the Witte Veen, approximately 0,3 square kilometres

**Analytic Plan**

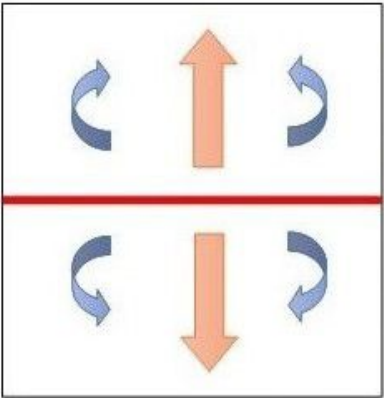
Thick description of border situations



Stylisation of border dynamics & disjunctures



Diagnosis of persistent border processes & effects



What are the pressures creating disjunctures?

What kind of disjunctures are attenuating interactions?

What kind of border effects can we postulate?

Border Effect	Observable Characteristics
Economical	Barrier to flow of economical activity and differences in market structure
Social	Barrier in understanding because of different norms and values
Political	Barrier to cooperation due to organisational and political differences
Psychological	Individual experiences and beliefs lead to cross-border prejudices
Physical	Disjunctures in fixed characteristics and cross-border movement



## List of interviewees

Name	Organisation
Boer, Jaap de	Noaberpap
Derksen, Harry	Regiegroep Natura 2000
Heuvel, Han van den	Regio Twente
Koop, Friso	Waterschap Vechtstromen
Meulenbroek, Rob	Natuurmonumenten
Michel, Stefan	Euregio
Pavlovic, Peter	Kreis Borken
Rouwenhorst, Jeffrey	Gemeenteraad Haaksbergen

## Summaries of interviews

Below one can find summaries of the interviews conducted with actors and managers of the Witte Veen. The interviews are listed chronologically according to the dates when they have been conducted.

### Natuurmonumenten

This was my first interview. I spoke with Rob Meulenbroek, who is a forester for

Natuurmonumenten in Twente. The interview started with a short description of the Natural area and what the main tasks of Natuurmonumenten were in this area. This was followed by details about physical components of the landscape such as roads and information signs, flora and fauna of the area and a discussion about management and cooperation and communication across the border. The Dutch side of the Witte Veen is an area of about 3 square kilometres, it is a combination of (peat) moor, meadows and forest areas. The hiking routes start in Germany, but for the largest part lead through the Dutch part of the area. Meulenbroek explained this was the case because the German side did not want hiking paths in their natural area. Because of this Natuurmonumenten saw an opportunity to designate the north-eastern part of the natural area as resting area for flora and fauna. The southern part of the area was to be used mostly for recreational purposes, which fitted nicely to the hiking routes starting at the Haarmühle, and a campsite being located in the south as well. Another issue dealt with in the past years was that of the so called “komiesenpad”, a path that was used for customs officials to check the border, this path would lead along the border, but was seen by nature protecting organisations as a barrier to natural integration. Therefore the decision was made (after opening the borders about 20 years ago) to let the path demise; no maintenance was to be done and nature was to take its own course. Meulenbroek explained that for the experienced eye the path could still be distinguished, but that it was no longer in use because of its impassibility.



An important characteristic of this natural area is the peat moor found in the northern part of the area. Next to that the natural area is also home to several protected plants and animals such as the “eenarig wollegras”, the “kamsalamander” (great crested newt) and a “boomkikker” (common tree

frog). Several years ago Natuurmonumenten introduced a special breed of cattle; Highland cattle into the area, intended to graze the area. Around this time the border to Germany had opened. Along this border there was a fence, and an opening was made so that the cattle would be able to cross the border into Germany and graze there as well. After a trial period it became clear that the cattle did not like the German grass (the area was much wetter than the Dutch area, there was also a very wet area just before the border opening which made that the cows did not want to cross), and they only went into the German area for about two times. Then the fence was closed up again and the Germans introduced their own cows (Heck cattle). Since 2013 the area is designated as Nature 2000 because of its rare flora and fauna. Meulenbroek explained that it was not uncommon that a border area such as this existed of rare nature. He explained this was because for many years the border had been avoided<sup>47</sup>, since it had not been certain which land belonged to whom, and people were afraid to start wars. This gave nature room to develop itself. Another effect of nature at the border in this case is that because of differences in legislation it is allowed in Germany (but not in the Netherlands) to hunt. The Dutch side has a larger natural area, and species such as wild boars and roes come from Germany into the Netherlands. Meulenbroek explained that local farmers experience a lot of inconvenience because of these animals and complain to Natuurmonumenten, wanting them to take action against these animals so they can no longer harm the farmers crops and income.

There are several issues of management of this natural area we spoke about. First of all Meulenbroek mentioned the EHS (Ecologische Hoofdstructuur) in relation to the salamander. Apparently Mr Bleker, “staatssecretaris van Economische Zaken, Landbouw en Innovatie”, decided to end this program that had been created to connect Dutch nature. Meulenbroek explained that this has disastrous effects on local populations of e.g. the great crested newt. Since this small animal won't be able to get from its current location at the Witte Veen to a newer area (as was its habit), it will most likely disappear from this region all together. The (non-) existence of rare species also provides another issue, related to Nature 2000, for management. This is best explained through the presence of the salamander and the tree frog. On the Dutch side both species are present and protected, on the German side however only the tree frog has been served and because of this only the tree frog is protected through management policy. One could think this is a communication malfunction, but Meulenbroek (and Pavlovic as well) explained that one can only protect the nature that exists in the designated area, which means that even though for the eye the area may seem as one, in effect they are managed as two separate natural areas<sup>48</sup>. Communication and cooperation is quite good according to Meulenbroek, he did however mention the experience of cultural differences such as hierarchy of management, procedures and other bureaucratic obstacles. Several times a year there is contact between Natuurmonumenten and Kreis Borken, and meetings are sometimes held at the Haarmühle, which also provides the possibility to enter the natural area. Natuurmonumenten also uses the Haarmühle for informative meetings, for instance when they want to discuss a plan with the locals (both German and Dutch; last meeting

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47 Another example of this region is the wastedeposit on the German side of the border. Because of its proximity to the relatively quiet region of the borderland, it has become the home to a breeding couple of owls (Meulenbroek explained there were owls, bats, and other rare species that live in this quiet area).

48 Another issue is that of water management. Since the area is a moor, it is important to keep water levels high. This is however against the wishes of the local farmers. Meulenbroek explained that on the Dutch side farms use the land more intensively, and are more involved in water management than on the German side. To manage the water in the area as good as possible Natuurmonumenten has created dams to keep the water in its area, and keep the moor wet. This has also been done on the German side, but there had been no communication with the Dutch side, and Meulenbroek explained that according to him the German dam was of no use, since it was created on a higher level and water would flow away from it.



was about 50/50). The cooperation between the Dutch and German side can be described as that of neighbours; they share a border of nature they manage, but are not involved as partners (i.e. they don't have to explain themselves to the other, but communication is used to share some information). No problems are experienced from this situation<sup>49</sup>, and because of this improving cross-border communication and cooperation is not a focus area for Natuurmonumenten.

In protecting the natural area Natuurmonumenten sometimes buys land to expand the area. This is however an expensive event, and because of this they also support local initiatives and interests into biological/ecological land use (e.g. farming), without buying the land itself. At the Witte Veen there are however two plots of land that they do wish to buy, of which one is owned by a German farmer. Buying land/expanding natural area.

The management of dirt roads paths and hiking trails is done by Natuurmonumenten, the routes are however an initiative of Wandelnetwerk Twente (now part of Regio Twente). The signs provided at the Haarmühle are a bilingual initiative of Natuurmonumenten. Meulenbroek explained that Natuurmonumenten created these bilingual signs because of the many German tourists in the region. A new plan is for information signs in both Dutch, German and English, so also international tourists can understand the information.

## Kreis Borken



This was an interview with the manager of the German side of the Witte Veen, Peter Pavlovic. The German side, the Witte Venn, is about 0,3 square kilometres, and the total natural area managed by Kreis Borken<sup>50</sup> is about 60 square kilometres. The German side is next to a nature reserve also a bird sanctuary and is a Nature 2000 area. The Witte Venn exists of meadows, wetlands, grazing areas and bog. The area of the Witte Venn, combined with the Krosewicker Grenzwald (which is located more to the south) is a Nature 2000 area since 2002. The areas had to be combined in order to be able to apply for Nature 2000 status, since the minimum size of a Nature 2000 area is 0,7 square kilometres, and application are done per memberstate (and the German Witte Venn could thus not be combined with the Dutch Witte Veen). When Kreis Borken had obtained the status of Nature 2000 they thought it striking that the Dutch area had not applied for this status. Pavlovic found it unfitting that the smaller side of the natural area, with a smaller amount of rare flora and fauna, would have the Nature 2000 status, and the larger Dutch side would not. Therefore a firm statement towards the Dutch was implemented that they should also apply.

The case with the Dutch cows was also discussed with Pavlovic. He explained that before it was nature, the northern area was farmland. They only recently obtained the land when the idea was created to let Dutch cows graze the area, but remainders of the farmland such as the fence along the border, were still there. Since it was only a trial period a choice was made to only create a hole in the fence (which was however quite large, about 10 metres), instead of removing it altogether, since that would be very costly, especially if after the trial a fence would prove necessary. Already at the start there were differences between the Dutch and the Germans, since regulations in Germany would require a blood examination of the cows, which was not needed in the Netherlands. After a period of two years the cows had only very occasionally gone to the German side of the

49 Another possible situation for management is that Natuurmonumenten would manage the whole area, including the German part. This is done in other cross-border areas with e.g. Belgium where Natuurmonumenten was invited by the Belgian manager to manage the Belgian area. Then there is no issue with one area being managed by two parties. Natuurmonumenten underlined that they did this only by invitation, and that they would not buy land outside of the Netherlands, nor did they have a focus to expand management across the Dutch borders to e.g. the whole of the EU.

50 Another nature protecting organisation in the area is Biologische Station Zwillbrock E.V. , but they don't manage the Witte Venn.

border, meaning a lot of maintenance was nevertheless needed, and the trial period was ended with closing the fence again. Germany then found a tenant who introduced Heck cattle, which could no longer go to the dry Dutch part, and was restricted to the German, wetter, side<sup>51</sup>.

As mentioned nature does not restrict itself to borders (except some cows who prefer dry land), this begged the question whether the protection plans of the Dutch and the Germans were alike.

Although there is some similarity in the flora and fauna found on the German side, the great crested newt for example is not found in Germany. This creates differences in management. Pavlovic mentioned that management is subjective to what one deems important, and “mann kann nur Schutzen wenn er da ist”; or One can only protect what is there, meaning that even though this salamander is a rare species, the management on the German side is not focussed on protecting it, because it has not been observed. One should first protect what is, and then what might be. That there is nature on the Dutch side however also provides benefits, which is seen nicely in the comparison of the Witte Venn and the Krosewicker Grenzwald. The Witte Venn profits because the Dutch side keeps the area wet, making the German side wet as well. The Krosewicker Grenzwald is however a natural area that ends at the border, where it verges on farmland, making it much more difficult to keep the nature wet, since the Dutch side manages its water in such a manner that the land is dry.

The differences in maps I found online was explained through the type of map used. Online maps, such as Google maps, or aerial photos use a different type of basis than specialised maps. Pavlovic explained that since the start of mapmaking the Dutch and the Germans have used different types and programs, making the resulting cadastres non-compatible.

For information folders<sup>52</sup> the explanation was different; this is actually not a combined effort. In some years a party has funds to create an information folder, and said party then draws up a text, and prints it in several languages. This party is not necessarily one of the managers of nature, it can be anyone interested in creating such a folder. Next to that when it comes to Kreis Borken (or Natuurmonumenten); they know what type of nature and other general information there is, also from across the border, and therefore don't need to ask one another for information. Because of the dependence on funds and input the folders are also all of different ages; the folder from Kreis Borken is at least 15 years old, whereas the Dutch folder is much younger (about 7), and the folder from Nordrhein Westfalen is only about 2 years old.

About management Pavlovic explained that the border had been avoided for many years because of “respect for the border”, and because of this a natural landscape had arisen. Furthermore he explained that the protection of natural areas originates in the 1950s, whereas the Witte Venn has been designated as a natural area already in 1939. The area has however grown over the years; where the original area spanned a little over 0,2 square kilometres, it is now over 0,3 square kilometres.

The goal of management in Germany is then also quite different from that in the Netherlands. Where in the Netherlands the goal is next to protection (of nature) also creating awareness (through accessibility of the area), this second point bears much less influence on the German side. The main goal on the German side is to protect the nature. Awareness is also a point of interest, but is provided in other ways. In stead of a hiking or biking path there are several viewpoints around the

51 In follow-up research it was explained that this new herd started out small, because of the little land that was available, but since new lands have been added the herd has been able to grow to 9 animals, however because of the lack of food in wintertime, the herd is given supplementary food in winter.

52 Another form of information is the road signs (for cars or tourist info); these also depend on local initiatives and contributing parties are therefore mentioned on the sign (often also an EU organisation). The signs created by Kreis Borken are checked every two years by a special committee.

area, where one can read an information sign or go into a hut that overviews the area. The focus on the German side is very much to protect nature, and not disturb it. This also leads to the viewpoint that roads that end at the border are better left that way; then they keep the resting area for nature quiet (so roads remain closed for nature protection purposes)

In managing this area Pavlovic has contact with Natuurmonumenten several times a year. He mentioned that cooperation with the Dutch side seems to be easier than with other Kreisen in the area. There is however one puzzling problem that both the Dutch and the German side cannot overcome; that of the German farmer on Dutch land. Natuurmonumenten wishes to buy the plot of land, and Kreis Borken is willing to find a plot of land for the farmer to farm on in Germany. There is however the issue of taxes; to buy a plot of land taxes have to be paid. In this case it would mean having to pay taxes to buy the land from the farmer, and having to pay taxes for buying new land in Germany. This means taxes have to be paid twice, and neither the farmer nor the managers of the natural areas are willing to spend the extra money needed to pay the extra taxes.

## Regio Twente

This is the overarching non-governmental organisation for several municipalities in Twente, they manage the topics referred to them by the municipalities. I spoke with Han van den Heuvel about the hiking and biking routes through the area of the Witte Veen and his experiences with cross-border cooperation.



The interview started with a description of the history of hiking routes. “Wandelnetwerk Twente” was the first of its kind in the Netherlands. It had been developed by individuals interested in nature and hiking. Much of the maintenance is done by volunteers. The focus of the developers was to create... What helped this goal was that the border region was already a very quiet region. The roads that crossed the border were often closed at that border for motorised vehicles, creating a nice place for bikers and hikers to enjoy quiet. Collaboration with already existing routes, such as the “Noaberpad” created possibilities for even more diverse routes. Next to hiking routes there were also bike routes (now “fietsknooppunten netwerk”), and also car routes, although for this last section much of the maintenance has stopped and the visible routes have shrunk to four routes in the Netherlands, which are now part of the ANWB (ANWB, 2015). The signposts along the routes are provided by Regio Twente, and because of the importance of tourism in this region, they are often created bilingual<sup>53</sup>.

One of the primary goals of the hiking and biking networks is to connect smaller areas such as the Witte Veen, or the close by Buurse Zand and Haaksberger Veen with the more northern located areas. Support for this purpose is the creation of close connections with German areas. The region of Twente, according to Van den Heuvel, is mainly focused on tourism as economical basis. For this purpose he has identified several physical characteristics of the border region, attractive for tourism. First of all there are the small closed roads, that are interesting for hikers and bikers, that cross the border. The goal is to open these roads as much as possible for non-motorised tourism (and keep them closed for cars and trucks, as this will provide more possibilities for recreation). Next to that Van den Heuvel is interested in reinstating the former “komiesenpaden” as they are heritage of the border, and may be interesting for new hiking routes. These two examples relate to the concept of

<sup>53</sup> An issue with the signposts is also who allows it. Since many roads in Germany are privately owned, Regio Twente needs to get approval to plant a signpost. Another issue is the many administrative layers present in Germany, making it difficult to obtain approval. If Regio Twente does not receive approval, it can happen that a route is only partly signed as is the case along the Dinkel, where there are posts in the Netherlands, but not in Germany.

“border experience”<sup>54</sup>, which seems to be the keyword to tourism in Twente. Part of this experience is also the lack of good mobile (internet) reception in the region, providing a possibility for so called “radiation-free recreation”. The region of Twente (and in smaller detail that of the Witte Veen) is thus attractive because of its border experience and quietness. Whether the goals mentioned above will be achieved is however a question of politics and money. Although in the Netherlands it is only needed to inform the political administrative layer of decisions and steps to be taken<sup>55</sup>, the politicians are the ones handling the money (think of subsidies of the municipality or province<sup>56</sup>) and decisions are based on whether the money is available. Because of this issue with money Regio Twente also cooperates with local initiatives that want to restore buildings or other local heritage. The final goal is to create a border region for relaxation and recreation, where there is no real border between Germany and the Netherlands (so people can easily cross the border), but where a border experience is available.

Because of the close cooperation with local parties and Euregio more German tourists have entered Twente. This helps developing Twente as a leisure economy. Although overall it can be said that cooperation is good, there are also large differences. For example: the cooperation with Bad Bentheim is better than that with Kreis Borken, but also better than with the Dutch region of the Achterhoek. Van den Heuvel distinguished that there were differences between cooperation with Nordrhein Westfalen, which was more difficult, and with Niedersachsen, which was faster and there was less suffering from differences in hierarchy and bureaucracy. It was also mentioned that contact from Regio Twente was often with a German municipality, and not with a Kreis. Mostly however Van den Heuvel believed that cooperation was negatively influenced by idleness, which had more effect than the cultural differences. Physical implications of differences are that of different rules and regulations regarding roads. When Regio Twente decides to create a route, this is discussed with the relevant managers of the area<sup>57</sup>. When a route goes across the border into Germany there are however several issues to be taken account of. Where in the Netherlands most roads are public property, in Germany there are still many roads that are privately owned. This makes planning a hiking route in Germany much more difficult. For the Witte Veen it was therefore an easy choice to let the hiking route only go along the public road, which was allowed in order to link it to the Haarmühle.

## Noaberpad

This is a long-distance hiking route (in the Netherlands designated as LAW 10) from Nieuweschans (Groningen, the Netherlands) to Emmerich (Nordrhein Westfalen, Germany). I have spoken with Jaap de Boer, who has been a volunteer for the Noaberpad for many years. The relevance of this hiking route to my research is that it is a very nice example of local cross-border initiatives, and next to that a section (no. 14, Enschede – Haaksbergen, Buurserstraat) also goes through the Witte Veen.

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54 Another example is that of “De Poppe”, which was a large border crossing to the north of the Witte Veen, near the A1 highway. The official application of the locations for customs has been ended quite some time ago, but several buildings still remain. Other buildings have been demolished in order to save money. There is interest to rebuild some of the former buildings, but it is not certain that funds will be available for this purpose.

55 According to Van den Heuvel this is not the case in Germany; there the decisions are taken by politicians directly.

56 Subsidies from the Euregio or EU can be applied for when funds are already partly available through e.g. local funding.

57 A cross-border example of a bike route is the Flamingo route. This was initiated by Biologische Station Zwillbrock E.V., and heavily subsidized by the EU. According to EU rules, such subsidized initiatives have to survive for at least 10 years. At the moment however it is no longer clear who is responsible for the route, and corresponding information signs (such as the pavilion along the hiking route of the Witte Veen), and maintenance is omitted.

The history of the Noaberpad starts already at the beginning of the 20<sup>th</sup> century, when holidays became more common for the working class in the Netherlands. A Dutch organisation called “instituut voor arbeidsontwikkeling” [IvAO] had developed several locations with the purpose of holiday home and interest was growing for possibilities of travelling from home to home. In this time the most common way of transport was hiking. With as goal supporting the interest in culture and nature the start was made to create a hiking route through the Dutch northern provinces of Groningen and Drenthe. In 1959 the IvAO developed into the “Nederlands Instituut voor Volksontwikkeling en Natuurvriendenwerk” or NIVON. In 1984 the long-distance hiking route was reopened, now including Twente and finishing in Buurse. The choice to lead the route along and across the Dutch-German border was made because one of the primary goals of the route was to connect it through as much natural areas as possible, and since the border had been an avoided region for many centuries, it became the location for the hiking route. What helped this goal was the development of so called “green border crossings”, which were border crossings that were open to slow and non-motorised traffic.



*Figure 26: Information book from Noaberpad*

Although the initiative of the hiking route was local and supported largely by volunteers, there was also cross-border as well as international involvement. Contact with Euregio made that this organisation supported the opening of the Noaberpad (then also called Euregiopad) in 1984 financially. Furthermore Euregio has proven to be an important partner for information and networking opportunities. Contact with German labour organisations was according to De Boer quite an experience, since they were organised very differently compared to the Dutch<sup>58</sup>. Aside from communication about the information signs (where would they be placed), there was little communication with the German side of the border. On one occasion a plan was formed to introduce a German information book about the Noaberpad, this plan was however never executed because of a lack of funds as well as due to a lack of publicity on the German side of the border. There was also cooperation with Han van den Heuvel (Regio Twente), who advised on the direction of the route (e.g. along the Haarmühle) and would later also provide the directionsignposts.

## Gemeenteraad Haaksbergen



The natural area of the Witte Veen in the Netherlands is located within the municipality of Haaksbergen. Through interviews I had gotten a perspective from both tourism as well as nature protection, this interview would provide me insight into cross-border businesses as well as (cross-border) politics. I spoke with Jeffrey Rouwenhorst, who is a member of the town council of Haaksbergen, a member of several committees and who is involved in the Euregio.

<sup>58</sup> Not only was the organisation and hierarchy very different to what the Dutch were accustomed to, differences were also found in communication as in Germany everyone had a title (e.g. Oberwanderführer) whereas in the Netherlands people addressed each other on a first name basis and differences were also seen in clothing (Germans wore uniforms, Dutch did not). That the Germans all had the same outfit led to the comparison with boy scouts by de Boer.

According to Rouwenhorst a disjuncture exists for labour in the region of Twente and Nordrhein Westfalen<sup>59</sup>. On the one side (Twente) there is a large surplus of labour available, and on the other side there is demand for just such labour. To resolve this problem a cross-border lobby for the labour market has been introduced. On the other hand Enschede especially is a location of so called “start-ups”; small businesses focussed on innovation and development. For these businesses moving to Germany is interesting because of lower real estate and land prices, and many businesses want to go across the border. For both examples in the end little to no action is taken; cultural differences such as language barriers, fiscal implications such as different taxes or pension regulations make that in practise not enough businesses and labourers cross the border. Another issue next to these differences is the lack of proper information sharing as well as a lack of contacts across the border. In trying to eliminate as much of these issues as possible the Euregio plays a large role. It provides a network for lobbying, and politicians from all municipalities in its region are represented. Ideally Euregio would become one area of coverage (e.g. for labour, but also healthcare, schools and other public needs), this could provide large advantages because of the increased size and demand of the region as well as homogeneous rules and regulations. This however is not something Rouwenhorst expects to happen, since according to him there is no longer a physical border, but barriers in rules and regulations persist to exist.

One of the main projects for Haaksbergen across the border is its partnership with the German town of Ahaus. Last year both towns have celebrated the 25<sup>th</sup> year of this partnership. When looking at the physical results it can however still be seen that both towns have their own business area, their own rules regarding businesses and labour is attracted in the way as is usually done at that side of the border. Although there are next to festivities also special theme days on common issues such as refugees or the labour market, here too a lack of contact and information sharing results in a less than ideal situation. This however is also explained by the mindset of many people working in local politics. A common misperception is that the only interesting area is that which is yours, or what is governed by you. For municipalities along the border this results in many missed opportunities. This misperception is however not exclusive to the national borders, but also to inland borders with other municipalities. In general this leads to little cooperation.

The lack of internationalisation as a focus can also be derived from the economical dilemma of the municipality of Haaksbergen. It has adopted a sentiment of “own problems first”, and own problems are ofcourse bound to own lands, and not lands across the border. Some years ago, when prices for land and real estate dropped, the municipality lost a lot of money, of which the effects are still present today. This means that the budget of the municipality needs to be divided quite economically, internationalisation is then a subject easily cut back. This is contradictory to the income of the municipality, since the tourism sector is one of the largest sectors of income for the town. Nevertheless internationalisation and border problems are subordinate issues, and cut backs are made on financing (cross-)border initiatives. Some funds can be received through subsidies form e.g. Interreg, but in the large picture this is only a small percentage of what is needed.

## Euregio

The Euregio is a partnership of 129 municipalities<sup>60</sup>. I spoke with Stefan Michel, who is a project

59 An interesting issue about Nordrhein Westfalen is that it is nearly the same size as the Netherlands (over 16 million inhabitants), because of this it can provide much more economic possibilities than only a relatively small region such as Twente.

60 Both Dutch and German municipalities are represented in Euregio. The issue of different languages is circumvented



leader with tasks such as mediator for cross-border cooperation, gathering cross-border information or organising activities with a cross-border cooperation perspective. Euregio is a self made supporting administrative and managerial body which often manages projects. It is a centre for information about its members, lobby on local demand and connecting parties across borders. A significant goal of this partnership is to increase publicity, knowledge and awareness of cross-border possibilities, to achieve this it has a small set of private means (such as facebook, twitter and press related events such as the “Tag der Nachbarsprache”), but it acts much more as an intermediary between and for its members. The main focus is to liquidate the negative effects of the border i.e. eliminating barriers<sup>61</sup>. This goal can be achieved by increasing knowledge (about rules, regulations and legislation) on both sides of the border<sup>62</sup>.

The projects to support local internationalisation are very diverse, and depend much on the local demand. There are several ways for Euregio to start a project: a demand for involvement can come from one of its members (for example advise on how to tackle an issue), Euregio can initiate a project by organising a meeting or seminar, which can, next to introducing the importance of the issue, also be used for networking. Examples of projects are the discussion about the Dutch OV-Chipkaart, which makes travelling across the border using public transportation quite difficult. But also the project of a “buurtbus” between Denekamp and Nordhorn. This project was first subsidized by Interreg, but has become self supporting. Another example is the demand to internationally cooperate on water management which has originated in the EU, where Euregio can support local demands for information and cooperation. A more local issue is that of housing benefits in Germany versus higher wages in the Netherlands. This has led to the situation of many Dutch people living in clusters in Germany. Some of these migrants try to integrate into their new environment, there are however also many that still keep most of their life (school, familie, friends) in the Netherlands. Euregio investigates together with locals how integration can be supported. Local demand is the key dimension, according to Michel Euregio becomes active when her member municipalities have a common goal. In short Euregio supports Bottom-Up developments with cross-border interests<sup>63</sup>.



## Waterschap Vechtstromen

This organisation manages water (groundwater, rivers, streams, etcetera) on the Dutch side of the border, at amongst others a part of the Witte Veen (the border of its area leads through the Witte Veen, the southern part is managed by Waterschap Rijn IJssel), I spoke with Friso Koop.




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by the practise that every member or depute can communicate in his/her own language. Often this is no problem, as both Dutch and Germans can understand the other language (even if they don't speak it). For instances where this is not the case there are always people available who can translate.

61 In the past years this has proven to be a difficult task, since management across the border often has different desires. For example the management of water: The Dutch side lobbies for more flood areas on the German side of the border, and the German side wishes that water would flow more quickly through the Dutch areas. On the other hand; the Haarmühle is a bottleneck for the migration of fish. This is explained according to Michel by the focus of local politicians; Kreis Borken makes plans without paying attention to the actions or plans of the Dutch.

62 To get a clear picture of the Euregio, it has developed its own custom made maps that do cross the border. An example of such a map can be found in the Annex.

63 The actions of Euregio are however guided strongly by its council that exists of deputies from the member municipalities.

As with other governance organisations, the management of this organisation is selected through public votes, and is thus a representation of the public. The water management is there for all land users, where it plays a role in tuning all needs, combined with (inter-)national legislation. One of the most important bodies of legislation for this organisation is the “Kaderrichtlijn Waterlichamen” [KRW], which is a European framework for the management of water in the same way Nature 2000 is a framework for the management of nature. Although it is a European framework, it is executed on a local level by the water management administrations together with the national minister (in the Netherlands this is the “Minister van Infrastructuur en Milieu”). The goal of the KRW is to improve the ecological water quality (e.g. flora and fauna) of the water (rivers, streams, etc.) throughout the EU. For Vechtstromen this means that some streams have a nonoptimal flow, and have to be adjusted. This is done through restoring the natural flow areas of streams, letting them meander more, and increasing the speed of currents. In the area of Vechtstromen the purpose of water is redirected towards nature, and for this purpose groundwater levels are also elevated. This is however only the case for the streams managed by Vechtstromen. Smaller water bodies such as ditches are often managed by the local land owner<sup>64</sup>. This makes the work of Vechtstromen a fine-tuning between (inter-)national legislation, goals of politics and the administration of the organisation and local needs and demands. Especially between Vechtstromen and local farmers tension may build up quickly, and to create as much support as possible local gatherings are organised as well as so called “keukentafelgesprekken”; conversations at the kitchen table. Nevertheless a dilemma remains between the needs of farmers (need low groundwaterlevels) and nature (need higher groundwaterlevels) remains. A local cross-border example of this conflict is the Hegebeek, which flows along the north side of the Witte Veen. Farmland becomes too wet, whereas the surrounding nature is dehydrated. For nature purposes the Hegebeek needs to be shoaled, this is however only useful if changes are made on the German side of the border. On the German side of the border there is mainly farmland, which is strongly drained. German farmers desire a quick discharge of rainwater into the Netherlands, but the Vechtstromen rather aim for water storage on the German side of the border. Even though agreements have been reached for several years, the execution of following plans has not been performed accordingly. At the moment a basin has been created at the German side of the border, this however does not function as a retention area for peak water levels (flood area). Nevertheless expectation is that in two years time the Dutch side can start developing the Hegebeek into a more natural area.

Just as nature, water does not obey national borders. This means that cooperation (also across national borders) is and has been one of the key components of water management. Nevertheless many barriers are encountered between Dutch and German water management organisations. As with maps, models on computers are often different per country. Next to that language also proves a barrier, just as differences in rules and interests (e.g. farmers versus nature). For questions that intersect with issues of or across the border there is a special team of employees at the Vechtstromen. Cross-border communication and cooperation is however not a main focus for the day to day operations of water management, and will not become so unless a specific problem arises.

Next to barriers in communication and legislation, physical barriers are also visible in the border landscape. Often a border can be recognised by the abrupt change of landscape. An example of such

<sup>64</sup> Land owners can usually do as they please with their own land, as long as it provides no problems to the general water management. Often most of the land around the streams managed by Vechtstromen are not even their own property, but by law they are the responsible party for managing the water flows. Next to that in the last few years it has become more common for Vechtstromen to sell land instead of buying it. This does emphasise the importance of cooperation with local partners, as public support then becomes even more important.

a situation is the Dutch-German border between Denekamp and Neuenhaus, where the Dinkel flows into Germany. On the Dutch side of the border this small river is enclosed by embankments and a maintenance path that can also be used as hiking path. At the border the embankments as well as the path end. For water flows this creates the issue that with a high water level in the river, the land in the Netherlands (even though it is protected by embankments) can flood because in Germany the river has flooded the area. On the other side, just at the north of Gronau the Dinkel flows into the Netherlands. Another issue is presented here. Because of an inconsistent flow of water, and heavy dependence on rainwater, the water levels of the Dinkel are very low in the summer. Koop mentioned that nearly all water in the Dinkel in the Netherlands in the summer originates from water purification sites. This water is of a much lesser quality than rainwater, making the Dinkel not attractive for recreation in the summertime. To resolve this issue a plan has been made to create a more regular flow of water through the use of retention areas. Benefits of such areas are that in dryer periods there will be a more consistent water flow, creating less drought, and next to that peak loads of rainwater will create less trouble because water can be caught in the retention areas. For plans of retention areas to succeed, cooperation and communication is very important. In his experience, Koop however explains that cooperation with other Dutch water management administrations is overall better than with German partners, as Dutch plans are often created together, and cooperation across the border may take more effort as explained through the example of the Hegebeek.

### ***Summary of contact with Regiegroep Natura 2000***

As mentioned in the main text I have sought out contact with the Regiegroep Nature 2000 as to further understand the importance and the meaning of a Nature 2000 area, as well as to understand how areas are designated as Nature 2000.

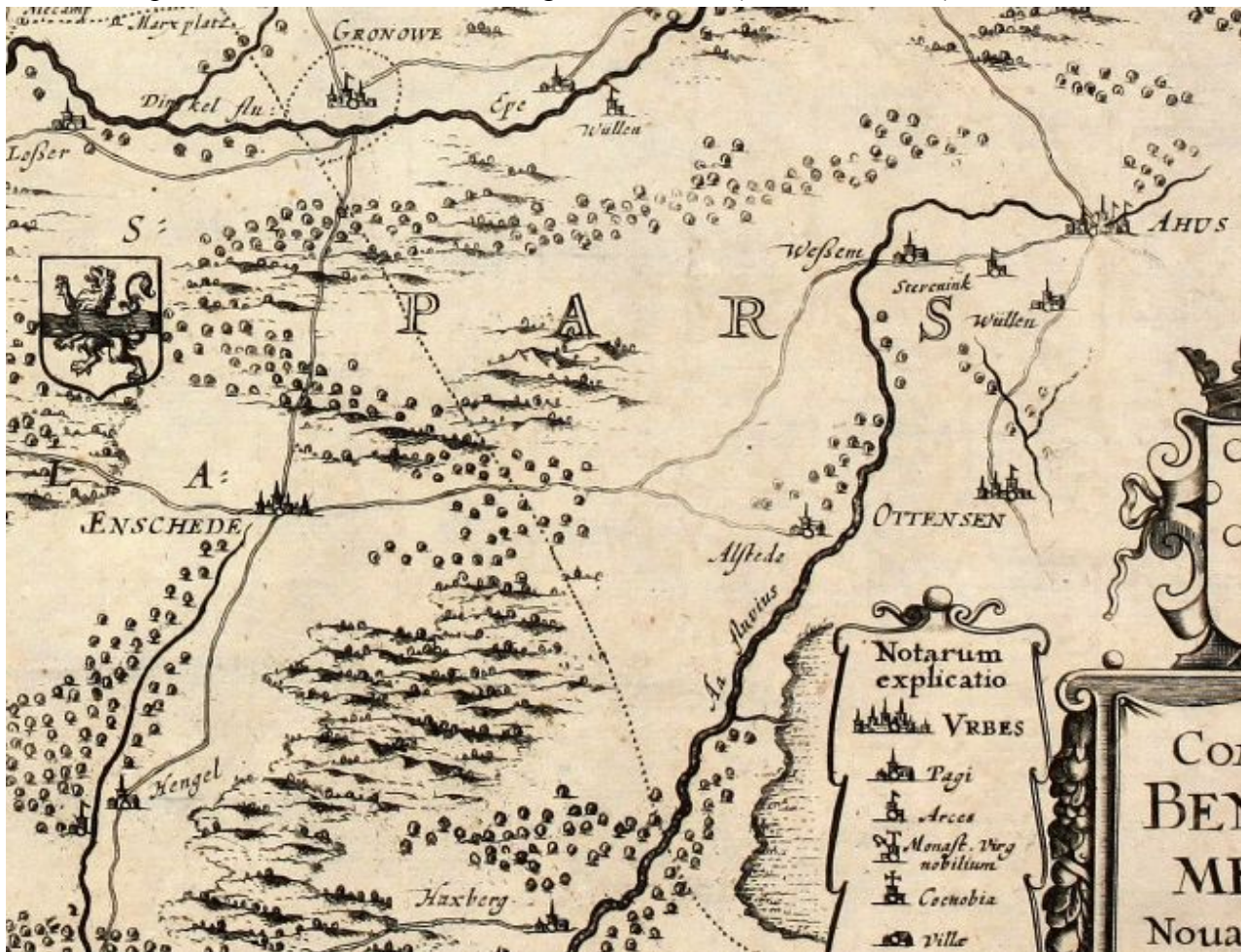
Within the EU the Directorate General of the Environment is responsible for nature guidelines, e.g. Nature 2000. Such a DG can be seen as a type of European ministry (of Environment). Each memberstate is responsible for the designation of their own Nature 2000 areas, this is also the case for areas located near or across a national border. European guidelines need to be integrated into national law, which means that executing such guidelines is also a national affair. This is a way of working which is very common for the EU since it provides the memberstates with the freedom to implement guidelines in a manner that suits them best, and provides them with the best possibilities to adjust to the new rules. There are several criteria that support a decision about a Nature 2000 area, these mainly are focused on the importance of the area within the memberstate. In total the Nature 2000 areas need to provide enough protection to conserve values of the area in the memberstate; this can mean that even though an area stretches across a border, it may be appointed Nature 2000 in only one memberstate, since it is relatively less important in the other memberstate. For example several areas exist in Germany that are appointed both Nature 2000 habitat as well as bird sanctuary, whereas they are only habitat-guidelines in the Netherlands. Located somewhat to the north there is also a natural area that is Nature 2000 in the Netherlands, and does not have this status in Germany. When the areas were selected (between 1996 and 2004), the minister of Agriculture, Nature and Fishery also looked across the border, and cross-border identity of natural areas did play a role with selection of Nature 2000 areas, but at the time not everything was known of the selection of other areas.

The coherence of management of Nature 2000 areas is supported through European nature guidelines, which make so called “conservation measures” mandatory. With these measures priorities for Nature 2000 areas must be set, the manner in which this is done is however free to be decided upon by each memberstate individually. Within the Netherlands the direction of “management plans” has been chosen, but it is also possible that memberstates do not make such plans at all. Of course it is useful to make agreements across the national borders about how to manage the natural areas, but often a line of communication already exists between the local managers. Within a Dutch management plan it is also decided who will take the lead in the management, which is in the areas around Enschede the province of Overijssel.

## Historical maps of the Witte Veen

This chapter will show several maps that have been made of the area around the Witte Veen, below each map one can see a year, this is the year the map has been published. These maps do not only show the development of the area, but also the perspectives of the mapmakers throughout the years.

The first map of the area between Haaksbergen and Ahaus (Hondius,  $\pm 1630$ ).



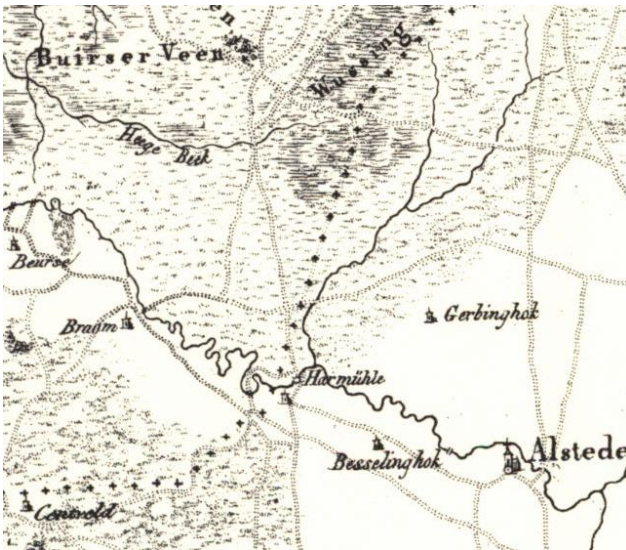
$\pm 1630$

This map does not have a focus on the north, meaning the town of Enschede is located below Gronau (Gronowe) and next to Ahaus (Ahus). On the map no roads can be found between Haaksbergen (Haxberg) and Ahaus. The border is probably the dotted line, although it is unclear to me what type of border this is (e.g. national or other).

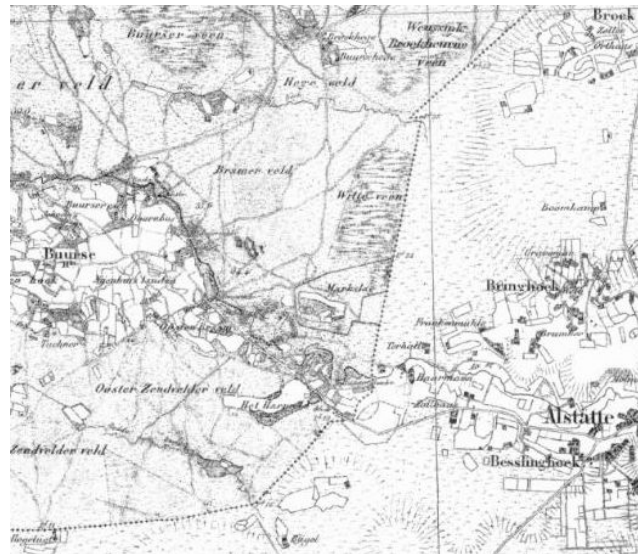
## Maps since 1815

The following maps show the area of the Witte Veen in a micro and a nano scale (which is 1:6.000). Both series of maps are retrieved from the website “topotijdreis” (Kadaster, 2015), where they are provided as celebration of 200 years of Dutch map making.



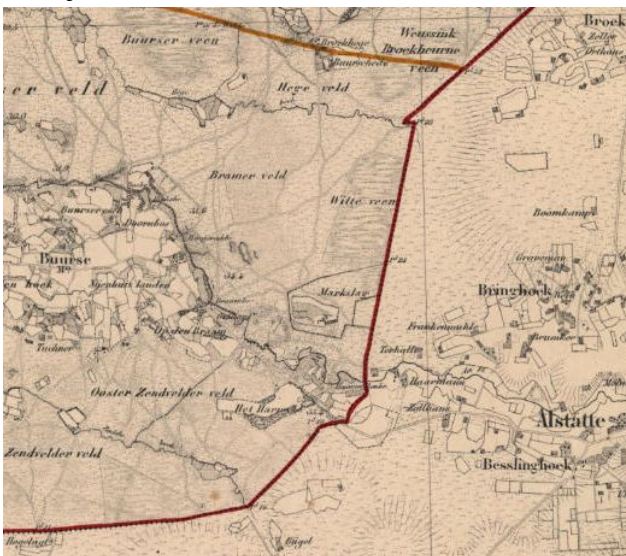


1820 (micro)



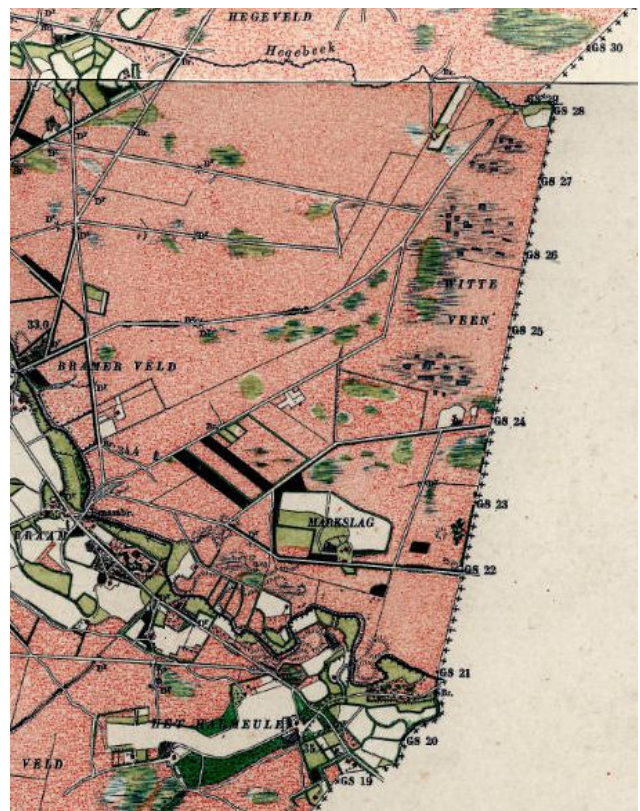
1850 (micro)

In 1820 the border is shown as a line of pluses. There are several roads crossing the border, in total about 6. No clear differences are shown between the German and Dutch side of the border. In 1850 the map is much more detailed than the prior map, the map only shows the Dutch part of the Witteveen, it is unclear whether the German part already existed at this time. The border is again shown as a line of pluses, accompanied by several numbers of border stones. One border crossing can be seen, just below the brook between Buurse and Alstätte.



1881 (micro)

In 1881 the border is shown as a combination of pluses (border stone markers) and a red line. The municipal border is shown as an orange line. Interesting is that the red line is also used for the provincial borders within the Netherlands. Only one border crossing (same as 1850) is shown on the map. The Dutch side of the map is somewhat more detailed than the German side.



1898 (nano)

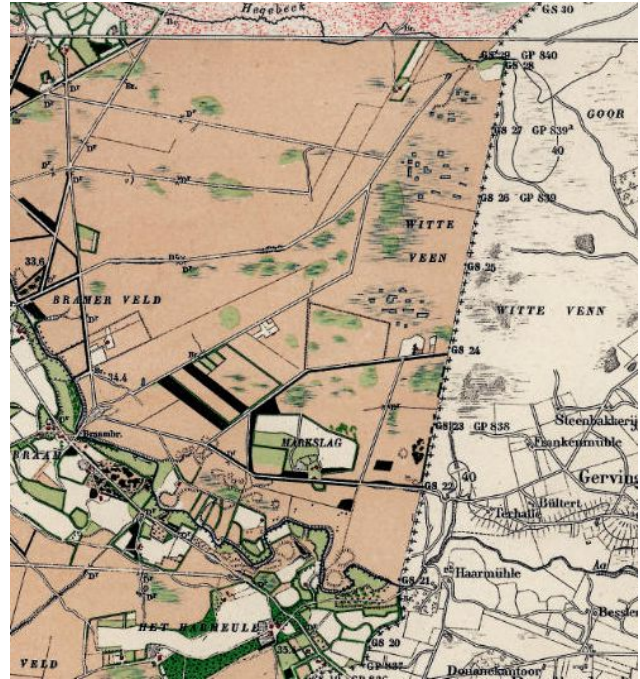
The map of 1898 is the first map that is different from the micro maps. In this year also only a nano



map was published. This would become normal in later years (i.e. that nano and micro maps would be published at different moments in time, which would lead to differences in the completeness of the maps). On this map one can clearly see that only the Dutch part of the landscape is shown, marking the border with pluses and leaving the German side of the border blank. This is also the first map in which colour is used, although mainly three colours are used to fill up the white areas, namely red, black and green. Because the map only shows the area until the border, it is uncertain which roads were cross-border roads. It is estimated that there are three border crossings. This is also the first map with a complete annotation of all the border stones along the border.



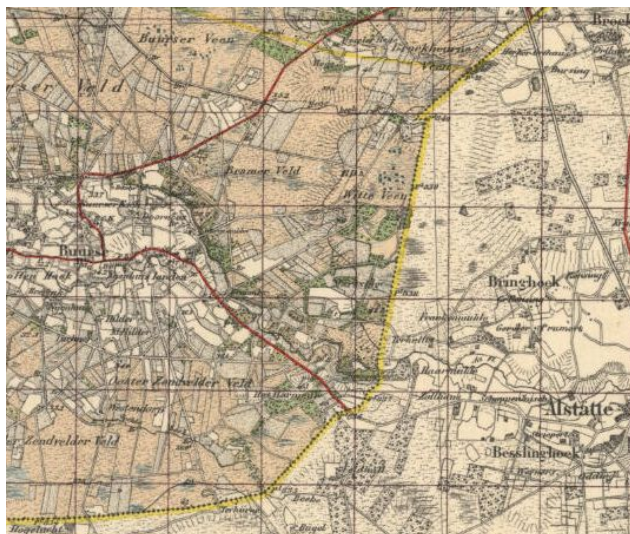
1913 (micro)



1913 (nano)

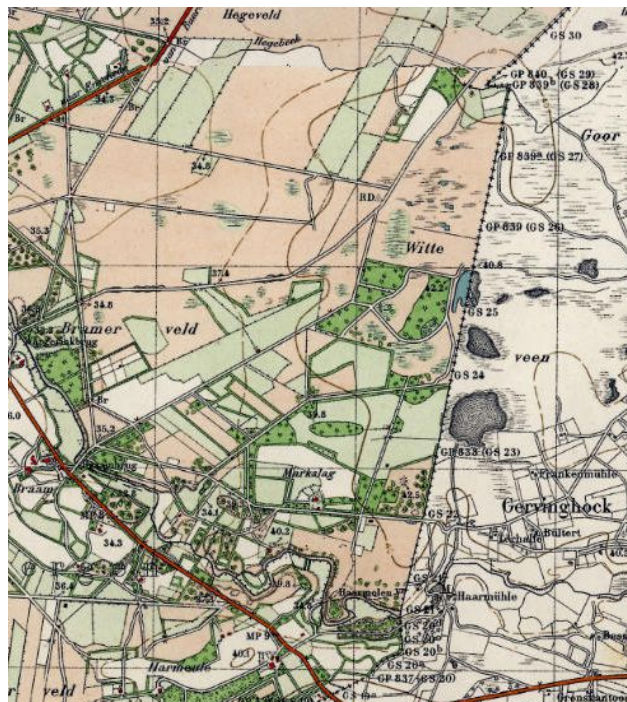
In 1913 the micro map is again only black and white, with more detail on the Dutch than on the German side. This map shows two clear border crossings; the same road as before, and to the north a straight line can be distinguished, which is a railway line. The border is still shown in the same manner as in 1881. The nano map in 1913 is again quite different from the micro map. It is first of all in colour on the Dutch side. One can also see that the nano map shows more possible border crossings than the micro map, the amount of border crossings is however still estimated at not more than four in the researched area. The nano map also for the first time shows the new border stone numbers (whereas on the micro map only the old numbers can be found). Next to that it also shows the German side of the Witte Veen, under the name the Witte Venn. This is the only time a Dutch map (from this source) names the German part of the area in the German name.





1925 (micro)

On this map about three border crossings can be counted (also one between Gerwinghook and Markslag). On the nano map about four crossings can be found.



1929 (nano)

The map of 1925 is the first map to show colours, although only at the Dutch side of the border. The border is marked as before, although now accompanied by a bright yellow line. One can see that the nano map shows a clear difference in colouring of the Dutch and German side as well as a difference in development of the area. The German side is shown quite detailed (although not as detailed as the Dutch side of the map), and also included in the "Witte Veen area".



1938 (micro)

Although the maps shown are different maps, at this time there are not many differences found between the micro and nano map. The main difference is the demarcation of the border, which is yellow in the micro map.



1937 (nano)

In 1938 the colours on the micro map have increased in number on the Dutch side of the border, on



the German side the black and white map has been given red lines for main roads. The amount of border crossings is a bit unclear, but is estimated at about seven, in the nano map however only about four can be found, which is possibly because of the roads in the north have not been accounted for in the more nano map. Although because of the lack of colours it is difficult to see, the Witte Veen now also stretches into Germany, and “Veen” is placed at the German side of the border.

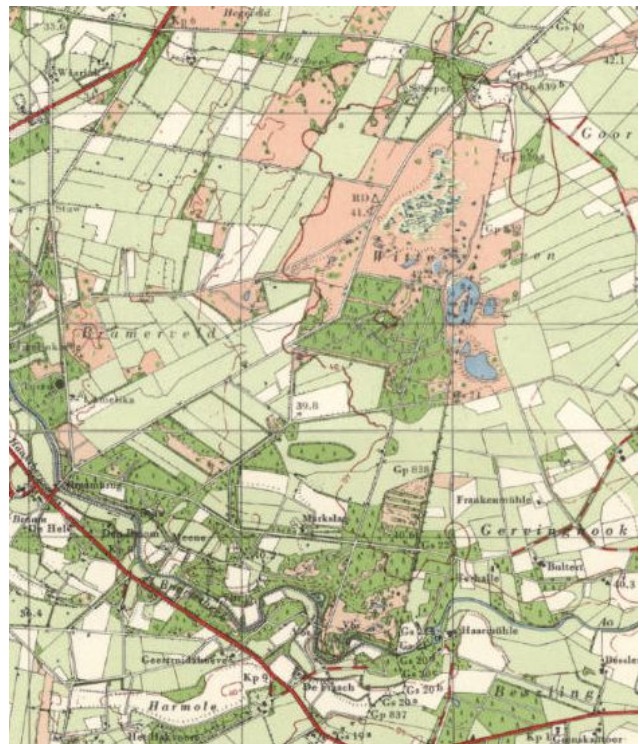


1944 (micro)

The map of 1944 shows both the Netherlands and Germany in colour, with the same amount of detail. About seven border crossings can be counted. The border is only marked by pluses. At this time no nano map of the area was made, so the only nano map available was that of 1937, in which the Netherlands was shown in colour, and Germany was only shown through black and white (with red lines for main roads).



1958 (micro)



1955 (nano)

In 1958 again a clear yellow line accompanies the pluses in marking the border. The colour and detail are however still about the same on each side of the border. At this time about five border crossings can be counted, although it is difficult to distinguish the types of roads on the map (perhaps not all crossings are equally accessible). The nano map of this time dates from 1955. The



information shown on this map is comparable to the information shown on the micro map of 1958, although again the border on the micro map is demarcated more strongly (with a yellow line) than on the nano map (where it is only a line of pluses).



1965 (micro)



1977 (micro)

On this page one can see the micro and nano maps of 1965 and 1977. It can be seen that there are much less differences between the maps published at these times, although one must keep note of the little time between the publishings.



1965 (nano)



1977 (nano)

One can see that the colours changed somewhat through the years, but on all four maps both the Netherlands and Germany are shown in detail and in colour. On all four maps one can see the border as a clearly marked line of pluses and yellow. On the nano maps about three border crossings

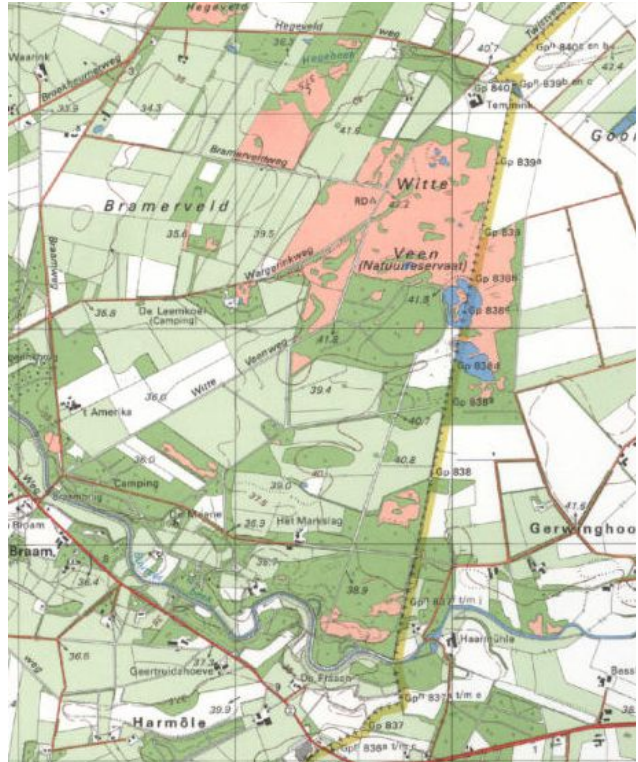


can be found, whereas this is about four crossings on the micro map of 1965 and about seven crossings of the micro map of 1977. In 1977 the railroad has partly been deconstructed, leaving only a road in the Netherlands. Even though the maps seem very alike, the nano maps are different from the micro maps in that they do show more detail (e.g. text is smaller, nature is demarcated more detailed). 1977 is also the first year in which the Witte Veen is marked as a natural reserve (on both the nano and the micro map). Furthermore one can see that demarcation of roads becomes more evident in 1977, the border stones however only show the large numbers.



1991 (micro)

At this time about three border crossings can be considered on the nano maps, on the micro map however about six border crossings are estimated. The railway line has become further unused, and the road accompanying it ends at the border with Germany.



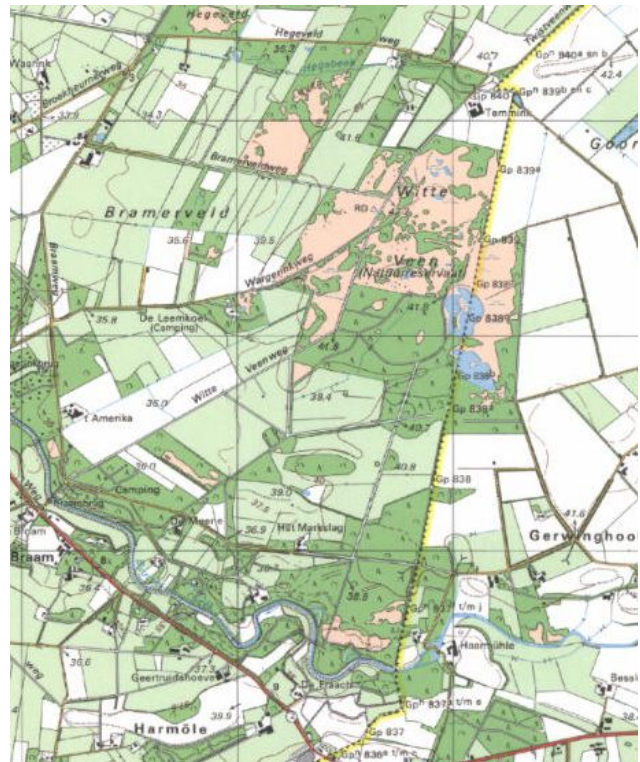
1989 (nano)

On this page one can see the micro map of 1991 as well as the nano maps of 1989, 1991 and 1995. As can be seen the maps were published separately, leading to differences between nano and micro maps.





1992 (nano)

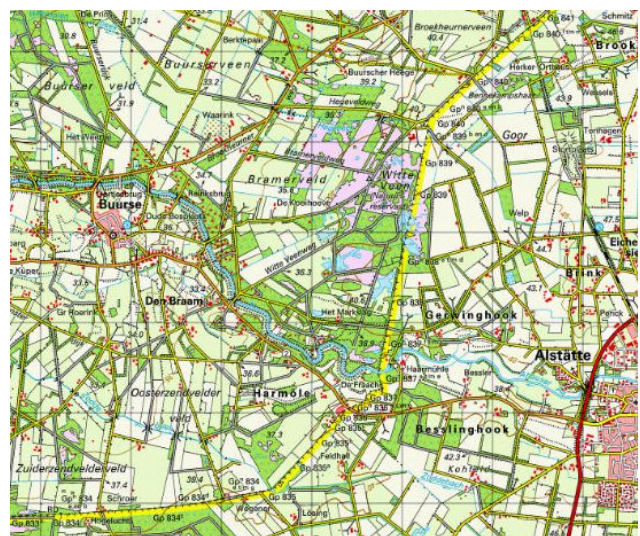


1995 (nano)

On the two maps shown above one can see that the information shown on the maps has not changed drastically (as it did when more time existed between publications). They are however three different maps, as can be seen through the different colours and differences in the amount of green versus pink in the Witte Veen natural reserve.



2001 (nano)



2002 (micro)

Again about six border crossings are visible on the micro map, and about three are estimated on the nano maps. The railroad has disappeared from the map, and is (in Germany) only visible through the borders of the agricultural landscape.



As with the maps of the prior page, the amount of maps published as nano maps and as micro maps differ in the early years of the 21<sup>st</sup> century. In 2002 the micro map has been published, in which one can see the changes of the nano maps until 2001 have been added, as well as extra information that has not been seen yet on the nano map (such as water on the south side of the Witte Veen). The nano maps of 2001, 2005 and 2009 show the development of both the Dutch and the German Witte Veen. On the map of 2009 the border is again marked by a combination of pluses and a yellow line.



2005 (nano)



2009 (nano)



2011 (micro)

The maps of 2010 and 2011 are the last maps published on by the Dutch Kadaster until 2015. One can see a clear change on the colouring of the German side of the border: Until the map of 2011, the border has had the same colour, and in 2011 it is coloured more vaguely. Although the micro and nano maps are still different (e.g. the border in the nano map is not marked with yellow), they both show this change in colour of the German side of the border. At this point on the micro map about 2 to 3 border crossings can be found, whereas this is 2 in the nano map of 2010, and between 1 and three on the nano map of 2011. Research in the area has shown me that there is only one legal border crossing in the area at this time (in 2016).

What is furthermore interesting to see is the backward progress of detail of the Witte Veen on the German side of the border. Where in 2010 the area has grown and developed, this progress is not



presented on the nano map of 2011. The municipal borders are also marked more clearly again, the provincial border is however not shown.



2010 (nano)



2011 (nano)

Summarized one can say the development of the border as shown on the map has gone through several stages. The first stage was the clear marking of the border around 1820, this was also visible on the map of that time (which presented the border much more clearly than the map of 1630). On this map the roads were also clearly visible, as well as a marshy area called “Wussing Veen”. In the two published maps after that time the detail on the Dutch side of the border increased, and maps started to look more like the maps we know today. The map of 1850 already showed the Witte Veen on the Dutch side, and only in 1913 was the German side of the border on the map shown in a way that the Witte Venn was distinguishable. This also leads to the second stage of maps. At this time the Dutch side was shown in colour, and the German side was less nano, only shown in black and white. Although towards the half of the twentieth century detail was increased and large roads were emphasized with red colour, it took until 1944 to create a map that had colour on both the Dutch and the German side. This type of map becomes part of the third stage, from between 1944 to 2010, where maps were published with much smaller intervals in time (sometimes only one year would exist between publishings), and maps were equally detailed and coloured on both the Dutch and German side of the border. This border was sometimes only a dotted line, and other times accompanied by a yellow line.

## **Article summary**

Summarised proposal for an article in “natuur bos landschap”, the professional journal of Staatsbosbeheer. It is written in Dutch since the journal is Dutch.

### **Breuklijn in de weg: grenzen in natuurbeheer**

Als u van Haaksbergen naar Ahaus rijdt, komt u door een enigszins heuvelachtig bosrijk gebied. Onderweg komt u een enkel gehucht tegen, en voor wie weet waar te kijken is er een zijweg naar een horecagelegenheid, vlak naast een mooi natuurgebiedje: Het Witte Veen. Voor wie onderweg heeft opgelet was het misschien zichtbaar aan de verouderde grenspaal en douanepost: het natuurgebied strekt zich uit over de nationale grens.

Als u wel eens op vakantie naar het buitenland bent geweest, bijvoorbeeld naar België, is het u misschien opgevallen dat de wegkwaliteit daar verschilde van die in Nederland. Mogelijk heeft u een lijn in het wegdek zien lopen, waar u de grens over ging. Deze lijn, een breuk tussen nationale wegdekken, is er omdat mensen hebben bepaald dat daar een grens loopt. Is er misschien meer te zien dan enkel deze lijn in het wegdek? Heeft die lijn mogelijk meer gevolgen, beperkingen, effecten, als er beter naar gekeken wordt? En wat heeft dat dan bijvoorbeeld te maken met de natuur?

Grenzen kunnen op veel manieren worden uitgelegd. De nationale grens is niet alleen een lijn op een kaart, maar duidt ook op verschillen in wetten, tussen nationale culturen en tussen overheden. Daarbij spelen ook verschillen tussen de aard van de grens (bijvoorbeeld regels, cultuur) en de effecten van de grens op zijn omgeving. Deze effecten kunnen worden onderverdeeld in 5 invalshoeken: economisch, sociaal, politiek, psychologisch en fysiek. Genoemde lijn op de weg (ofwel een fysieke karakteristiek in het landschap) kan het gevolg zijn van een combinatie van de genoemde invalshoeken. Er kunnen meer effecten leiden tot die lijn op de weg, bijvoorbeeld een politiek effect, waarbij wordt besloten tot aan de grens te asfalteren, en niet over de grens heen samen te werken. Het slechte wegdek kan ook het effect zijn van een slechte economische situatie van het ene land ten opzichte van het andere.

De eerder genoemde lijn kan worden gezien als een fysieke breuk in het wegennetwerk: er is een netwerk met Nederlandse wegnummers en wegdek, en een netwerk met Belgische wegnummers en wegdek. Zulke breuken in netwerken zijn in het Witte Veen vaker waarneembaar, zoals in wandel- en fietsroutes, in kaarten maar ook in de natuur en natuurbeheer. Bijvoorbeeld de kamsalamander. Deze is aanwezig in het Nederlandse gedeelte, maar heeft volgens de beheerder Natuurmonumenten een slechte toekomst prognose: de EHS-ontwikkeling is ter plekke afgeschaft, waardoor de leefgebieden van deze salamander niet verbonden worden en hij niet kan migreren. Het Duitse natuurbeheer van het gebied beroept zich erop dat de kamsalamander niet in hun gebied voor komt, en de salamander daarom dus niet vanuit het beheer beschermd wordt en er ook geen leefgebied geschikt wordt gemaakt.

Een andere grensbreuk is de Natura 2000 status van het Nederlandse gebied (habitat, 350 ha) en het Duitse gebied (vogel en habitat, 30 ha). Hierbij kan de kanttekening worden geplaatst dat het Duitse gebied, om qua formaat in aanmerking te komen voor Natura 2000 moest worden gecombineerd in

de aanvraag met een ander verderop gelegen Duits natuurgebied, terwijl het Witte Veen voor het ongetrainde oog één logisch grensoverschrijdend gebied is van meer dan voldoende omvang. Er zijn nog meer verschillen tussen het Nederlandse en het Duitse beheer van het Witte Veen (zoals wel of niet opengesteld, of de verschillende rassen koeien die het gebied begrazen en hun inzet). En er zijn daarnaast ook verschillen in bijvoorbeeld waterbeheer, of tussen boeren en geldende jachtregels.

De Europese samenwerking heeft tot doel om grensoverschrijdende samenwerking te bevorderen. In de praktijk blijkt echter dat in vele opzichten de lokale en regionale regelgeving, beleid en bestuur hindernissen veroorzaken die de grenzen blijven benadrukken. Dit terwijl bijvoorbeeld de sociale, culturele en natuurlijke grenzen in die gebieden feitelijk marginaal lijken.

In het definitieve artikel ook aanstippen van Euregio en Interreg (verschillen en overeenkomsten), iets meer uitleg over de 5 invalshoeken, stakeholder diagram Witte Veen, analyse natuurvisie aan beide kanten grens (Latour benadering) en top down/bottom up aspecten van de grens en “dikke en dunne” grenzen en institutionele aspecten van de grens.



[illegible]







